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primusGFS

2021

An internationally recognized Global Food Safety Initiative (GFSI) food safety audit scheme

QUESTIONS & EXPECTATIONS

PrimusGFS v3.2

MODULE 3

INDOOR AGRICULTURE
Good Agricultural Practices Requirements

POWERED | CONNECTED | SMART

SUPPORTED | GLOBAL | RECOGNIZED

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Introduction

PrimusGFS v3.2

Acknowledgements

PrimusGFS v3.2 aligns to the GFSI's v2020 benchmarking requirements and brings updates to address: stakeholder feedback, continued focus on FDA FSMA's Produce Safety and Preventive Control for Human Food, relevant recent best practice updates from commodity specific guidance documents, updates to GMP Applicability Charts, the addition of new corrective action closure requirements, updated scientific research metrics (e.g. mitigation buffer distances, produce wash water anti-microbial metrics), refined and improved GAP pesticide questions, and updates to question flow concerns where necessary (e.g., harvest practice questions).

Version 3.2 satisfies the needs of users from a local to a global scale with flexible modules developed to ensure strength in food safety programs, regulatory compliance, and marketability. Azzule Systems gained valuable feedback from several of our clients, as well as from Certification Bodies, Training Centers, and industry experts at-large during the implementation of PrimusGFS v3.1. We believe strongly in serving the needs of the various groups with which we collaborate, and in doing so worked to address all feedback and suggestions in the updated v3.2.

We are grateful to those individuals and companies that provided invaluable feedback to help continually improve PrimusGFS.

Azzule would like to thank the following individuals for their contributions to v3.2: Our Certification Bodies and Training Centers, and in alphabetical order, Ashley Bell (Cloche Technical Solutions), Barbara Hulick (Produce Alliance), Cailin Keaton (Pasquinelli Produce Co.), Clarisa Molina (SerKa Solutions, LLC), Sarah Schlicher, Todd Sebring (Hunt Bros), Mason Silva (Rancho Guadalupe), Enrique Urrutia, Bruce Wilkins (CoActive Food Group, LLC), Anamaria Witaszczyk (Farmbox Greens).

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PrimusGFS integrates automatically with the supply chain, compliance, and data management features of the Azzule platform which provide food producers the tools and the knowledge necessary to take action within their food safety program. Automation and integration also allow participating operations to gain market access and visibility in promoting their food safety commitments to a large network of current and potential customers.

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PrimusGFS v3.2

Questions & Expectations

MODULE 3: INDOOR AGRICULTURE

Good Agricultural Practices Requirements

(Sections 3.01 to 3.11)

This Module should be completed for each one of the indoor agriculture operations in the scope of the organization's application.

CONTACT:

Please do not hesitate to contact us via email at **PrimusGFS@azzule.com** or by phone if you have any questions or concerns.

Santa Maria, California | United States of America | **+1-805-862-4219**

Culiacán, Sinaloa | Mexico | **+52-667-716-5037**

Viña del Mar | Chile | **+56-32-332-5045**

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GENERAL			
Question No.	Question	Total Points	Expectation
3.01.01 ⚠	Is there a designated person responsible for the operation's food safety program?	10 ⚠	There should be a designated on-site person/persons responsible for the operation's food safety program. They should have documented formal training or trained by someone that has formal credentials that is documented. This training should meet all state and federal requirements.
3.01.02	If the operation is growing under organic principles, is there written documentation of current certification by an accredited organic certification organization?	0	Information gathering question. Current certification by an accredited organic certification organization (national/local) should cover the audited crops, be on file and available for review. N/A if not growing under organic principles.
3.01.03 ⚠	Does the operation have a written food safety hygiene and health policy covering at least worker and visitor hygiene and health, infants and toddlers, animal presence in growing and storage areas, fecal matter, dropped product, blood and bodily fluids?	15 ⚠	There should be written food safety policy rules regarding worker and visitor personal hygiene, GAPs and health requirements. The policy should cover the rules related to hygiene and health (e.g., hand washing, eating/drinking, smoking, specific clothing rules, foreign material issues, cuts/wounds, illness rules, etc.), no infants and toddlers allowed in the growing area, what to do in the case of evidence of animals and/or fecal matter in the growing and/or storage areas, and what to do in the case of dropped product, and if the product comes into contact with blood or other bodily fluids. All workers should be issued a list of rules in the relevant languages and confirm by signing they understand and agree to abide. Training provided and associated records should meet local and national regulations.
SITE			
Question No.	Question	Total Points	Expectation
3.02.01	Is there a map that accurately shows all aspects of the operation, including water sources and fixtures used to deliver water used in the operation?	5	There is a map or similar document (photograph, drawing) that accurately shows the growing area(s), adjacent land use/features, location of permanent water fixtures and the flow of the water system, including any holding tanks and water captured for re-use. Permanent fixtures include wells, gates, reservoirs, returns and other above ground features. Septic systems, effluent lagoons or ponds, surface water bodies are also identified. Document should enable location of the water sources and the production blocks they serve.
3.02.02 ⚠	Are growing areas adequately identified or coded to enable trace back and trace forward in the event of a recall?	15 ⚠	Coding details (e.g. location name or reference code, blocks of the growing area(s), building code or number(s)) should be in sufficient detail to enable trace back and trace forward through the distribution system. Details of the coding need to be tied to the record keeping system (e.g., pesticide, fertilizer records, microbiological testing reports). There should be field maps available demonstrating the coding details used in the operation(s).

3.02.03	Has a documented risk assessment been conducted at least annually for the operation?	15	A documented risk assessment of the growing area, each water source and surrounding areas should be performed prior to the first seasonal planting and at least annually, and when any changes are made to the growing area, water sources and adjacent land. This should detail known or reasonable foreseeable risks/hazards, the specific microbial, chemical and physical risks and their severity and likelihood of occurring in the following areas: previous use of the growing area, adjacent land use (e.g., CAFO), water source risks from animal access, upstream contamination/runoff, proper well condition, water treatment, water capture, backflow, maintenance, cross contamination from leaching, cross connections, recirculating water, sewage and septic systems, etc. (chemical hazards e.g. heavy metals, perchlorate, etc., and microbial hazards e.g. pathogenic *E. coli*), water use, fertilizers, crop protection chemicals, worker health and hygiene, equipment and tools used for harvest, storage, transportation, topography of the land for runoff (% slope, soil type), prevailing weather conditions or weather events. and any other applicable areas. Farms and indoor agriculture operations following the CA or AZ LGMA should reference current metrics e.g., a buffer zone of approximately 1,200 ft. (365m) for CAFO's with >1,000 head or 1 mile (1609m) for 80,000 head CAFO, which may increase or decrease after assessing the risks, determining, and deploying mitigation measures.
3.02.03a ⚠	If any risk is identified, have corrective actions and/ or preventative measures been documented and implemented?	15 ⚠	For any risks identified in the assessment, the operation should detail what practice is being done to minimize identified risk/hazard, how to measure/monitor the effectiveness of the practice, how often to measure, and how it is verified and recorded. There should be documented evidence/validation that corrective actions and/or preventative measures have been taken when any risk was identified and were adequate for the specific situation. If overhead irrigation is used, there needs to be examples of how the operation is minimizing the risk.
3.02.04	Are the necessary food defense controls implemented in the operation?	5	The operation should have implemented the necessary controls for preventing intentional contamination of the product, high-risk areas, external areas and vulnerable points (i.e. those that are not permanently locked) . These measures should be based on the risk associated with the operation, as detailed in the food defense plan (1.08.02). Some high-risk areas of the operation include: personnel, visitors, contractors, computers, raw material receipt (raw materials, product and packaging), trucks (incoming and outbound), water sources, storage areas for product, materials, chemicals, production areas, shipping areas, utensils or other items used in the growing area, etc.
3.02.05	Is the exterior area immediately outside the facility, including roads, yards and parking areas, free of litter, weeds and standing water?	5	Litter, waste, refuse, uncut weeds or grass and standing water within the immediate vicinity of the building may constitute an attractant or breeding place for rodents, insects or other pests, as well as microorganisms that may cause contamination.
3.02.06	Is any packaging stored outside, being stored protected?	10	Packaging should be stored off the ground (on pallets, racks, etc.) and protected from dust, leaks and other contaminants. Neither, food contact packaging (including RPCs if used as primary packaging) nor non-food contact packaging e.g. cardboard outers should be stored outside. If done, any outside stored packaging materials should be covered with a waterproof and dust proof shroud (often made of plastic material) and included under a pest control program.
3.02.07	Are control measures being implemented for the outside storage of equipment, pallets, tires etc. (i.e. out of the mud, stacked to prevent pest harborage, away from the building perimeter)?	5	Incorrectly stored pallets and equipment can provide areas for pest harborage and/or cross contamination. Equipment should be stored at least 4" (10 cm) off the ground and at least 24" (61 cm) away from the building perimeter. Workers should check the stored equipment (e.g., irrigation pipes) periodically to ensure that it has not become a pest harborage area or dirty due to rains. Inventory checks should occur in order to ensure that these storage areas do not become full of unnecessary items. Outside storage areas should be within the scope of the pest control program.

3.02.08	Is the area around the dumpster/cull truck/trash area clean?	3	The dumpster/cull truck/trash area should be located away from facility entrances, where traffic flow may be a source of cross contamination. The area around the dumpster/cull truck/trash area should be maintained in a clean condition. There should not be any spillage on the ground. There should not be any standing water or liquid seepage around the dumpster/cull truck/trash area and there should not be any foul odor present. The dumpster/cull truck/trash area should be cleaned on a regular basis.
3.02.09	Are outside garbage receptacles and dumpsters kept covered or closed?	5	All dumpsters and garbage receptacles should have a cover and be kept covered to prevent the attraction of insects, rodents and other pests. Fine mesh lids are acceptable. Just having the lids is not acceptable i.e. when not in use, the dumpsters and garbage receptacles should be closed. Dumpsters that are only used for dry non-food waste (e.g., paper, cardboard, etc.) are exempt from this requirement.
3.02.10 ⚠	Where soil, substrates or fertilizer (e.g., compost) are stored or handled, are measures in place to ensure seepage and runoff is collected or diverted and does not reach growing areas, product, or any of the water sources? **A ZERO POINT DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Soil, substrates and fertilizer (e.g., compost, compost teas, fish emulsions, fish meal, blood meal, bio-fertilizers, etc.) are stored in a manner to prevent contamination to the growing areas, product, or water sources. Containers should be structurally sound and not a source of runoff or contamination. There should be appropriate and effective barriers, coverings, soil berms, pits or lagoons to divert or collect potential run-off or threats from wind, as applicable. **A ZERO POINT DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.02.11 ⚠	Where there are fill stations for fuel or pesticides, is it evident that the location and/or use is not a risk of contamination to the product, water sources, growing areas, equipment, packaging materials, etc.?	15 ⚠	Fill station area should not be a risk of contamination to the product, water sources, production areas, equipment, packaging materials, etc.
3.02.12 ⚠	Is the audited area free from animal presence and/or animal activity (wild or domestic)? If Total Compliance, go to 3.02.13	15 ⚠	Animals can represent potential contamination to the growing area, to the crop, to the equipment, etc., and therefore, should not be present in the operations. Evidence of animal presence can include tracks, fecal matter, feathers, etc. Note: This includes any packaging or storage areas. (e.g., equipment, agronomic inputs, chemicals)
3.02.12a ⚠	Is the audited area free from any evidence of animal fecal matter? **A ZERO POINT (NON-COMPLIANCE) DOWNSCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	Fecal matter is a potential contaminant to the product being grown. Produce that has come into direct contact with fecal matter is not to be harvested. A "no harvest zone" of approximately 5ft (1.5 m) radius should be implemented unless or until adequate mitigation measures have been considered. If evidence of fecal matter is found, a food safety risk assessment should be conducted by qualified worker and include appropriate corrective and preventative actions. Consideration of the maturity stage and type of crop involved is required. Any evidence of human fecal matter in the growing area is an automatic failure. Any evidence of human fecal matter in the growing area is an automatic failure (scored in 3.02.13).
3.02.13 ⚠	Is the audited area free from any evidence of human fecal matter? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Human fecal matter is a potential contaminant to the product being grown. Any evidence of human fecal matter in the audited area is an automatic failure. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.02.14 ⚠	Is the audited area free from evidence of infants or toddlers?	10 ⚠	Infants and toddlers can represent potential contamination to the growing area, to the crop, to packaging and should not be present in the operations, including chemical or equipment storage areas.

PEST CONTROL

Question No.	Question	Total Points	Expectation
3.03.01	Is there a written policy prohibiting animals in the facility, including the growing areas and any packaging or equipment storage areas?	10	Domestic and wild animals, including birds, are not permitted in the facility, including packaging and storage areas. There should be a written policy in place to affirm this.

3.03.02 ⚠	Is there an effective pest control program in place? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	There should be an effective, proactive pest control program (in-house or contracted) to control rodents (also insects, reptiles and birds where necessary) and prevent infestation. Any down score will result in an automatic failure. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.03.03	Is the pest control program properly documented, detailing the scope of the program, target pests and frequency of checks, including a copy of the contract with the extermination company (if used), Pest Control Operator license(s)/training (if baits are used), and insurance documents?	15	There should be a documented pest control program in place detailing the scope of the program, target pests and frequency of checks. If performed in-house, the pest-control operators or equivalent should be registered, licensed or have documented formal training (if regulation does not require certification or registration). As applicable, the person's training and/or license should specify structural pest control or equivalent, or have documentation to show that the license includes structural pest control training if not specified on license. Any substitute operator's license credentials should also be on file. If the service is contracted, the pest control contract service/company should be licensed in structural pest control, insured and the contract should be documented (quoting the scope of the program, types of pests it covers and frequency of visits). When licensing legislation does not apply (e.g., in certain countries), there should be evidence of on-going training. Auditors should check documentation for expiry dates.
3.03.04	Is there a schematic drawing/plan of the facility (indoor agriculture operation), showing numbered locations of all pest monitoring devices (e.g., rodent traps, bait stations, insect light traps, etc.) both inside and outside the facility?	10	A schematic drawing or trap map is on file, current and details internal and external traps. All devices (e.g., tin cats, Ketch-Alls, bait stations, glue boards, insect light traps, electronic fly killer units, etc.) should be numbered and clearly identified on the map. The numbers should match what is in operation). The document should be accurate, dated and should show the type of device.
3.03.05 ⚠	Are service reports created for pest control checks detailing inspection records, application records, and corrective actions of issues noted (in-house and/or contract)?	10 ⚠	Service reports from the contract pest control company should be available for review if pest control is contracted out. In-house inspection records should be available for review if pest control is conducted in-house. Records should include services performed, date of service, chemicals used, signs of activity, corrective actions, and trend reports.
3.03.06 ⚠	Are closed doors, and windows to the outside pest proof?	10 ⚠	Doors, windows, louvers and screens should be maintained, should fit tightly with a maximum allowable gap of 1/8 inch (3 mm). Special attention should be given to the maintenance of weather strips. Air curtains and self-closing devices where used, should be operating properly.
3.03.07 ⚠	Is the area outside the facility free of evidence of pest activity?	10 ⚠	All areas should be free of recurring/existing external pest activity. Evidence (e.g., activity/tracks, feces) of rodents, animals (e.g., dogs and/or birds) in active areas outside the facility is an indication of a pest pressure on the whole building. All possible measures should be taken to avoid attracting pests to the facility perimeter.
3.03.08 ⚠	Are pest control devices located away from exposed raw materials (e.g., seeds, transplants, soil, media), finished goods and packaging, and poisonous bait stations are not used within the facility?	10 ⚠	Pest control devices should be located away from exposed food products, packaging materials, or equipment to prevent any physical or microbial contamination. Poisonous bait stations should not be located within the facility. No bait should be found outside of bait stations.
3.03.09 ⚠	Are pest control devices maintained in a clean and intact condition and marked as monitored (or bar code scanned) on a regular basis?	5 ⚠	All pest control devices should be maintained clean, in working order and replaced when damaged so that they will accomplish their intended use. Date of inspections should be posted on the devices (unless barcode scanned), as well as kept on file.
3.03.10 ⚠	Are interior and exterior building perimeter pest control devices adequate in number and location?	5 ⚠	The distance between devices should be determined based on the activity and the needs of the operation. As a reference, the following guidelines can be used to locate devices. Inside pest control: mechanical traps every 20-40 ft (6-12 m). Outside building perimeter: mechanical traps and/or bait stations every 50-100 ft (15-30 m). Interior and exterior devices should be placed on both sides of doorways. Land Perimeter (if used): within 50 ft (30 m) or buildings and at 50-100 ft (15-30 m).

3.03.11	Are all pest control devices identified by a number or other code (e.g. barcode)?	5	All devices should be clearly identified (e.g. numbered) to facilitate monitoring and maintenance. All internal rodent devices should be located with wall signs (that state the trap number and also that they are pest control device identifier signs).
3.03.12 ⚠	Are all pest control devices effective and bait stations secured?	5 ⚠	All devices should be correctly orientated with openings parallel with and closest to walls. Bait stations should be locked and tamper resistant in some way (e.g., locks, screws, etc.). Bait stations should be secured to prevent removal.

GENERAL CHEMICALS

Question No.	Question	Total Points	Expectation
3.04.01	Are there chemical inventory logs for chemicals, including pesticides, fertilizers and cleaning and sanitizing chemicals?	3	Chemicals within the scope of this question include pesticides, fertilizers, cleaners and sanitizers i.e. sanitation chemicals and food contact chemicals, such as chlorine, etc. Primary information in the product inventory includes: the product or chemical names, container volumes, number on hand, and location of containers. Inventory by storage area/type of chemical is optimal. The inventory should take into account the arrival of new stocks and any discrepancies should be explained. Minimum frequency for inventory checks should be monthly during production season and a copy should be maintained separate from the chemical storage location(s) and available for auditor review. The frequency of the inventory checks may decrease in short season or off-season operations; auditor discretion applies.
3.04.02 ⚠	Are all cleaning and maintenance chemicals (pesticides, sanitizers, detergents, lubricants, etc.) stored securely, safely and are they labeled correctly?	15 ⚠	Chemicals are stored in a designated (with a sign), secure (locked) area, away from fertilizers and pesticides, food and packaging materials and separated from the growing areas. Spill controls should be in place for opened in use containers. All chemical containers should be off the floor, have legible labels of contents; this includes chemicals that have been decanted from master containers into smaller containers. Empty pesticide containers should be kept in a secured storage area until they can be recycled or disposed of properly.
3.04.03 ⚠	Are "food grade" and "non-food grade" chemicals used appropriately, according to the label and not commingled?	10 ⚠	All chemicals applied should be approved by the prevailing authority for their designated use and used according to label instructions. Only food grade lubricants should be used anywhere near product and packaging materials. "Food grade" and "non-food grade" materials should be stored in separate designated areas and adequately labeled. Grease guns and containers should be labeled adequately. Access to non-food grade materials should be limited to those with knowledge of the correct use of chemicals.
3.04.04 ⚠	Does the operation use the appropriate test strips, test kits or test probes for verifying the concentrations of anti-microbial chemicals (e.g., dip stations, etc.) being used, are they in operational condition and are they being used correctly?	15 ⚠	The strength (concentration, pH, etc.) of anti-microbial chemicals should be checked on a regular basis and recorded. All test solutions/strips should be within date code, appropriate for the concentrations used and stored correctly.

PRODUCTION FACILITY			
Question No.	Question	Total Points	Expectation
3.05.01	Is there a written cleaning schedule (Master Sanitation Schedule) that shows what and where is to be cleaned and how often?	10	A master sanitation program should be in place that covers all the growing areas, storage areas, break areas, restrooms, maintenance and waste areas. The master sanitation program should reflect the type of indoor growing operation. (i.e. mushroom production, hydroponic, aeroponic, vertical growing). (Within these areas, areas such as walls, floors, light covers, overhead pipes, etc. should be included. List should include equipment (food contact and non-food contact), pallet jacks, fork lifts, carts, floor scrubbers, cooling equipment (evaporators, cooling coils, drip pans, etc., lift trucks and company owned trailers, etc.) The master sanitation schedule should include a detailed list of areas and equipment to be cleaned as well as the frequency.
3.05.02	Are there written cleaning and sanitation procedures (Sanitation Standard Operating Procedures) for the indoor agriculture operation and all equipment?	10	The indoor agricultural growing areas (floors, walls, overheads, etc.), all equipment (food contact, non-food contact, cooling equipment, etc.), internal transport vehicles and in-house owned trailers should be cleaned and sanitized on a regularly scheduled basis, based on written Sanitation Standard Operating Procedures (SSOPs). There should be SSOPs covering the cleaning and sanitizing operations noted in the master sanitation schedule. Procedures should detail what, who, how and when, including chemical details, solution temperature, water pressure, dwell times, any disassembly/reassembly instructions and cleaning verification procedures.
3.05.03 ⚠	Are cleaning and sanitation logs on file that shows what was done, when and by who?	10 ⚠	Sanitation logs should be on file that cover all areas (e.g., production areas, storage areas, break areas, restrooms, maintenance, etc.), detailing walls, floors, overhead and all equipment (e.g., production equipment (food contact and non-food contact), pallet jacks, forklifts, carts, floor scrubbers, cooling equipment, lift trucks, company owned trailers, etc.). Logs should include: date, list of areas/equipment that were cleaned and sanitized, and the individual accountable who signed-off for each completed task. Logs should cover sanitation operations as noted in the master sanitation schedule.
3.05.04	Where used, are there records showing filters in air conditioning, evaporative coolers, ventilation and air filtration units are regularly cleaned and replaced?	5	Records should be made available to verify that filters in air conditioning, ventilation and air filtration units are regularly cleaned and replaced. Records might include in-house sanitation records, maintenance records and/or contractor records/invoices.
3.05.05	Where used, are there records showing cooling units are maintenance serviced and cleaned at least every 12 months or more frequently as required?	10	Records should be available to verify that the cooling units are serviced and cleaned on a scheduled basis. Cooling units should be cleaned and sanitized at least every 12 months or more frequently to prevent harmful pathogens from growing. Maintenance servicing ensures that coolers are working properly and efficiently. Records might include in-house sanitation records, maintenance records and/or contractor records/invoices.
3.05.06	If fans or other blowing equipment are used, are they operated in a manner that minimizes the potential for contaminating product, equipment, or packaging materials?	5	All fan guards (cooling units and general ventilation) in the facility are clean. There is no build-up of dust or other materials on the fan guards. Other blowing equipment (e.g. swamp cooler) are kept clean and properly maintained.
3.05.07	Is there a documented glass and brittle plastic management procedure (including company glass and brittle plastic policy, glass breakage procedure and where necessary a glass register)?	10	There should be a documented site glass management procedure including company glass and brittle plastic policy, glass and brittle plastic breakage procedure and glass register if necessary (a no glass policy in growing, storage or maintenance areas policy should be the target). If certain glass and brittle plastic items are allowed, a glass register should describe each item, location and quantity; items should be checked on a routine basis. Clean-up procedure after glass and brittle plastic breakage should indicate what equipment to use and include boot and tool checks/decontamination procedures to ensure broken glass or brittle plastic is not unintentionally transported out of the area.

3.05.08 ⚠	Are any potential foreign material issues (e.g., metal, glass, plastic) controlled?	10 ⚠	There should be no foreign material issues that are or could be potential risks to the product. Examples include, but are not limited to, glass bottles, unprotected lights on equipment, staples on wooden crates, hair pins, using "snappable" blades instead of one piece blades, broken and brittle plastic issues on re-useable totes.
3.05.09 ⚠	Are all lights in the facility that could potentially contaminate raw materials (e.g. seeds, transplants, soil, media), product, equipment or packaging shielded, coated or otherwise shatter resistant to protect product from contamination in the event of a breakage?	15 ⚠	All glass lights in the facility that can potentially contaminate finished products, raw materials (e.g. seeds, transplants, soil, media), equipment, or packaging should be shielded, coated or manufactured of shatter-resistant materials to protect product from contamination in the event of breakage. This includes, but is not limited to items such as light bulbs, emergency lights, truck loading lights (dock lamps), insect trap lights, forklift lights, lights in bathrooms or maintenance shops that open into the growing area, etc. End piece fittings on tube lights should be secure. Precautions should be taken to prevent glass contamination in the event of glass breakage.
3.05.10 ⚠	Are raw materials (e.g. seeds, transplants, soil, media), finished goods and food contact packaging within accepted tolerances for spoilage and free from adulteration? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Raw materials, finished goods, food contact packaging and food contact surfaces should be free from spoilage, adulteration and/or gross contamination (21 CFR 110.3g). If legislation exists, then the contamination should be viewed against this legislation (e.g., USDA Grading Standards often include decay tolerances). Spoilage and adulteration would include any physical, chemical or biological contamination including blood and bodily fluids. Measures should be taken to prevent any known or reasonably foreseeable hazard (e.g., Clostridium botulinum in mushrooms). This question is designed to allow an auditor to halt an audit when finding gross contamination issues. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.05.11	Are materials (commodities, packaging, inputs, etc.) properly marked with codes (receipt dates, manufacture dates, etc.)?	5	All materials should be properly marked with receipt dates and/or tracking information (lot numbers, code dating) for traceability/recall and stock rotation purposes. This coding should be understood by all workers, in order to ensure FIFO and effective traceback/recall procedures.
3.05.12	Are materials (commodities, packaging, etc.) rotated using FIFO policy?	5	All materials should be rotated using First in First Out (FIFO) policy to ensure items are used in the correct order they are received and within their allocated shelf-life. Materials should be clearly marked or labeled with some kind of rotation coding that is understood by all workers, in order to ensure FIFO and effective traceback/recall procedures. Proper rotation of materials can prevent stock losses due to pest infestation, decomposition, mold and other problems associated with prolonged storage.
3.05.13 ⚠	Does the process flow, facility layout, worker control, utensil control, internal vehicle use, etc. ensure that finished goods are not contaminated by raw materials (e.g., seeds, transplants, soil, media)?	15 ⚠	Incoming raw materials (e.g. seeds, transplants, soil, media) should not be a source of contamination to the growing area and/or finished goods. Raw materials should not come into contact with packaged products. There should be plenty of space and separation to help avoid cross contamination issues. Workers who handle raw materials should not then handle packaged products without first ensuring that they are free of raw material contaminants.
3.05.14 ⚠	Is there proper storage and adequate separation of raw materials (e.g. seeds, transplants, soil, media), products and packaging?	15 ⚠	All raw materials, products and packaging should be stored off the ground (i.e., on racks, pallets, shelves, etc.). Materials should be properly protected during storage to prevent contamination. Raw materials, finished product and packaging materials should be stored in separate areas to prevent cross contamination. When separate room storage is not possible, the auditor should assess the risks, especially with respect to cross contamination.
3.05.15 ⚠	Are all exposed materials (product, packaging, etc.) protected from overhead contamination (e.g. ladders, motors, condensation, lubricants, walkways, loose panels, degrading insulation, etc.)?	15 ⚠	Ceilings and/or any overhead fixtures above storage are free from condensation or dust. Ladders or walkways (catwalks) above exposed product or packaging material have kick plates at least 3.5 inches high and are covered in some way that protects the product underneath. Drips or condensate (e.g. from roof, fixtures, ducts, pipes, etc.) should not contaminate food, food contact surfaces or packaging material. Adequate measures should be in place to protect from condensate.

3.05.16	Are all growing areas clean and well maintained; especially lights, ducts, fans, floor areas by walls and equipment, and other hard to reach areas?	10	All areas should be maintained in a clean and sanitary condition.
3.05.17	Are single service containers used for their intended purpose only so that potential cross contamination is prevented?	5	Single service containers are used for their intended purpose only (food contact use, not to hold nuts, bolts, trash or other miscellaneous items) and should not be re-used. Returnable plastic containers (RPCs) (e.g., CHEP, IFCO) should be treated like single service containers and only used for product. If a single service container is used for any other reason than the storage and distribution of food, it should be clearly differentiated as such (e.g., painted another color and labeled).
3.05.18	Are re-usable containers cleanable or used with a liner and clearly designated for the specific purpose (finished product, trash, etc.) such that cross contamination is prevented?	5	Identification of reusable containers (visually or in the language understood by the workers) helps to minimize contamination of products. All re-usable containers should be able to be cleaned or used with a clean liner to protect against contamination. Cleaning type and frequency should be determined based on the products and processes involved. Bins, boxes, hoppers, barrels, baskets, etc. used for the storage of raw materials (e.g., seeds, transplants, soil, media), ingredients, finished goods or packaging of these items should be stored to ensure that they remain clean and uncontaminated (e.g., covered clean).
3.05.19	Are all utensils, hoses, and other items not being used, stored clean and in a manner to prevent contamination?	10	All utensils, hoses and other items not being used are stored clean and in a manner to prevent contamination (off ground, dedicated areas, etc.). Hoses should be stored coiled, off the floor and ideally used in such a manner that ground contact is avoided.
3.05.20	Are floor drains covered, do they appear clean, free from odors, in good repair, and flow in a manner that prevents contamination (e.g., from high to low risk areas, from high risk directly to drain system)?	5	Floor drains should flow in a manner that prevents contamination, be cleaned on a frequent basis to remove residues, prevent growth of harmful bacteria and allow for proper drainage. Drains should be covered, and sides and bases should be made of a smooth material that does not trap debris. N/A if there are no drains.
3.05.21	Are internal transport vehicles (e.g., forklifts, bobcats, pallet jacks, carts, floor cleaners, etc.), clean, do not emit toxic fumes and are being used in a sanitary manner?	5	Internal transport vehicles (e.g., forklifts, bobcats, pallet jacks, trolleys, floor cleaners, etc.) should be part of the sanitation program, maintained clean and not allowed to be a vector of cross contamination. Vehicles used in food areas should not be gasoline or diesel powered. Propane (LPG) powered vehicles are acceptable, while electric powered are ideal.

INSPECTION

Question No.	Question	Total Points	Expectation
3.06.01 ⚠	Is there documented evidence of the internal audits performed, detailing findings and corrective actions?	15 ⚠	There should be records of the internal audits performed, meeting the frequency defined in the internal audit program. The records should include the date of the audit, name of the internal auditor, scope of the audit, justification for answers (not just checked √ or all Y/N), detailing any deficiencies found and the corrective actions taken. An audit checklist (ideally PrimusGFS) should be used that covers all areas of the PrimusGFS audit, including worker hygiene, harvest practices, on-site storage, etc. No down score if another audit checklist is used, as long as all areas are covered. See 1.04.01 for specific details.
3.06.02 ⚠	Is there a daily inspection log, including but not limited to, checking worker hygiene, housekeeping of bathrooms, break area, growing area, and storage area?	10 ⚠	Operations are inspected daily. This should be a start-up check of all potential issues.

TRAINING			
Question No.	Question	Total Points	Expectation
3.07.01 ⚠	Is there a food safety hygiene training program covering new and existing workers and are there records of these training events?	15 ⚠	There should be a formal training program to inform workers of the current policies and requirements of the company regarding hygiene. Training should be in the language understood by the workers, and training type and intensity should reflect the risks associated with the products/processes. Frequency should be at the start of the season before starting work and then some topics covered at least quarterly, but ideally monthly. These trainings should cover food safety and hygiene policies and basic food safety and hygiene topics, the importance of detecting food safety and/or hygiene issues with co-workers and visitors, all food safety or hygiene issues in which they are responsible, and correcting and reporting problems. Training logs should have a clearly defined topic(s) covered, trainer(s) and material(s) used/given. Topics include, but not limited to, hand washing, protective clothing (where applicable), recognizing and reporting injury and illness, blood and bodily fluids, jewelry, dropped product, animal intrusion, food defense. There should be records of workers who have attended each session.
3.07.02 ⚠	Is there a documented training program with training logs for the sanitation workers, including best practices and chemical use details?	5 ⚠	Sanitation training should ensure that the workers understand the importance of proper sanitation, cleaning efficacy, how to use the cleaning chemicals and how to understand Sanitation Standard Operating Procedures. Unless sanitation workers attend regular food safety trainings, sanitation training should also include elements of food safety training pertinent to sanitation operations (e.g., hand washing, restroom use, foreign material, etc.). Training logs should have a clearly defined topic(s) covered, trainer(s) material(s) used/given and who attended the training (name and signature).
3.07.03 ⚠	Are there written and communicated procedures in place that require food handlers to report any cuts or grazes and/or if they are suffering any illnesses that might be a contamination risk to the products being produced, and return to work requirements? (In countries with health privacy/confidentiality laws, e.g. USA, auditors can check procedure/policy but not the actual records).	10 ⚠	There should be documented procedures that are communicated (e.g., worker signature on a training log) to food handlers, requiring them to report any cuts, grazes and/or any illnesses that might be a food safety cross contamination risk. Procedures to note return to work requirements for affected workers. Procedures should cover recording requirements, but auditors should not request to review records where countries have laws covering privacy/confidentiality of health records.
3.07.04	Are there worker food safety non-conformance records and associated corrective actions (including retraining records)?	3	There should be records covering when workers are found not following food safety requirements. These records should also show corrective actions and evidence that retraining has occurred (where relevant).

WORKER HYGIENE			
Question No.	Question	Total Points	Expectation
3.08.01 ⚠	Are toilet facilities adequate in number and location? **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	Toilet facilities should be available to all workers and visitors, while work is actively occurring. At least one toilet per 20 workers should be provided, or if more stringent, as per prevailing national/local guidelines. Toilet facility placement should be within 1/4 mile or 5 minutes walking distance of where workers are located, or if more stringent, as per prevailing national/local guidelines. A 5 minute drive is not acceptable while work is actively occurring with groups of three or more workers. Where there are two or less workers present (e.g., spray activities, irrigation check) and workers have transportation that is immediately available to toilets within a 5 minute drive, it is acceptable to score as total compliance. Automatic failure if there are insufficient or inadequate toilet facilities. **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.08.01a ⚠	Are toilet facilities in a suitable location to prevent contamination to product, packaging, equipment, and growing areas?	15 ⚠	Placement of toilet facilities should be in a suitable location to prevent contamination to product, packaging, equipment, water sources, and growing areas. Consideration should be given when portable units are used that they are not parked (if on trailers) too close to the edge of the crop and have a minimum 15 ft (4.5 m) buffer distance in the event of a spill or leak. If pit toilets are used, consider proximity to crop and water sources.
3.08.01b ⚠	Are toilet facilities designed and maintained to prevent contamination (e.g., free from leaks and cracks)?	5 ⚠	Toilet facilities should be free from cracks and leaks and any waste holding tanks from toilets must be designed and maintained properly to prevent contamination. Waste holding tanks should be free of leaks, cracks and constructed of durable materials (e.g. plastic) that will not degrade or decompose (no wood). Each toilet should be ventilated to outside air. Pit toilets cannot be considered to be properly designed to prevent contamination.
3.08.01c	Are toilet facilities constructed of materials that are easy to clean?	3	Toilet facilities should be constructed of non-porous materials that are easy to clean and sanitize. The floors, walls, ceiling, partitions and doors should be made of a finish that can be easily cleaned.
3.08.01d	Are the toilet facility materials constructed of a light color allowing easy evaluation of cleaning performance?	3	Toilet facilities should be constructed of materials light in color, allowing easy evaluation of cleaning performance.
3.08.01e	Are toilets supplied with toilet paper and is the toilet paper maintained properly (e.g., toilet paper rolls are not stored on the floor or in the urinals)?	5	Toilet paper should be provided in a suitable holder in each toilet facility. Toilet paper should be maintained properly (e.g., toilet paper rolls are not stored on the floor or in the urinals).
3.08.01f	Where used, is there a documented procedure for emptying the waste holding tanks in a hygienic manner and also in a way that prevents product, packaging, equipment, water systems and growing area contamination?	5	If toilets have waste holding tanks, they should be emptied, pumped, and cleaned in a manner to avoid contamination to product, packaging, equipment, water systems and growing area(s). Equipment used in emptying/pumping must be in good working order. A documented procedure should exist and include a response plan for major leaks or spills, including indicating where pumped waste is disposed of and requiring communication to the designated person(s) responsible for the food safety program regarding the actions taken when a major leak or spill occurred.
3.08.01g ⚠	Are toilet facilities and hand washing stations clean and are there records showing cleaning, servicing and stocking is occurring regularly?	15 ⚠	Toilet facilities and hand washing stations should be cleaned and sanitized on a regular basis. Servicing records (either contracted or in-house) should be available for review showing cleaning, servicing and stocking is occurring regularly. Soiled tissue should be flushed down the toilet/placed in the holding tank (not placed in trash cans and/or on the floor).

3.08.02	Is hand washing signage posted appropriately?	5	Bathrooms and lunchroom(s) should have hand washing signs as a reminder to wash hands before and after eating, returning to work and after using the toilet. Signs need to be posted and in the language of the workers (picture signs are allowed). The signs should be permanent and placed in key areas where workers can easily see them.
3.08.03 ⚠	Are hand washing stations adequate in number and appropriately located for worker access and monitoring usage? **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	An adequate number of hand washing stations, in working order, should be provided to ensure efficient worker flow (1 per 20 people on site), and available to all workers and visitors. Hands free is an optimum system. Hand washing stations should be visible and located within close proximity of toilet facilities and lunchrooms and 1/4 mile or 5 minutes walking distance of where workers are located. **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.08.03a ⚠	Are hand washing stations in working order (no leaks, free of clogged drains, etc.) and restricted to hand washing purposes only?	15 ⚠	Hand washing stations should be used only for hand washing and be maintained in good working order with proper drainage or designed to capture rinse water.
3.08.03b ⚠	Are hand wash stations clearly visible (e.g., situated outside the toilet facility) and easily accessible to workers?	5 ⚠	Hand wash stations should be clearly visible (i.e. situated outside the toilet facility) in order to verify hand washing activities, and easily accessible to workers.
3.08.03c ⚠	Are hand wash stations adequately stocked with unscented soap and paper towels?	5 ⚠	All hand washing facilities should be properly stocked with liquid non-perfumed, neutral or antiseptic soap. Single use paper towels should be used and units properly located. There should be an adequate stock of soap and paper towels.
3.08.04 (new question) ⚠	Are total coliforms (TC) and generic *E. coli* tests conducted on the water used for hand washing at the required and/or expected frequency?	15 ⚠	Total coliforms (TC) and generic *E. coli* testing should occur prior to use and at least annually. Water samples should be taken from as close to the point of use as is practical e.g. hand wash spigot/faucet. If there are multiple hand wash units, then samples should be taken from a different location each test (randomize or rotate locations). If there are multiple sources for hand wash water, testing should also account for each source used.
3.08.04a (new question)	Do written procedures (SOPs) exist covering proper sampling protocols, which include where samples should be taken and how samples should be identified?	10	There should be a documented procedure in place detailing how water samples are to be taken, including stating how samples should be identified i.e. clearly naming the location that the sample was taken, identifying the hand wash station, the water source and the date.
3.08.04b (new question)	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	Written procedures (SOPs) should exist covering corrective measures, not only for the discovery of unsuitable or abnormal water testing results, but also as a preparation on how to handle such findings.
3.08.04c (new question) ⚠	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15 ⚠	For total coliforms (TC) and generic *E. coli*, there should be negative or < detection limit (MPN or CFU/100mL). Where thresholds have been exceeded, there should be recorded corrective actions, including investigations and water retests.
3.08.05 ⚠	Are workers washing and sanitizing their hands before starting work each day, after using the restroom, after breaks, before putting on gloves and whenever hands may be contaminated?	15 ⚠	Worker conformance to hand washing and sanitizing procedures should be assessed as washing hands is the first step in avoiding food contamination. Workers should be observed washing their hands prior to beginning work, after breaks, after using the toilets, before putting on gloves, and whenever hands may have become a source of contamination (e.g., after eating, after using a handkerchief or tissue, smoking, drinking, etc.).

3.08.06	Are secondary hand sanitation stations (e.g., touch-free dispensers) adequate in number and location, and are the stations properly maintained?	5	Secondary hand sanitation is required for items that may be "ready-to-eat" (e.g., herbs, tomatoes, edible flowers, etc.). Secondary hand sanitation (hand dips, gels or sprays) does not replace hand washing requirements (lack surfactant qualities). Secondary hand sanitation stations should be non-perfumed, have 60% to 95% ethanol or isopropanol and conveniently located in traffic zones but should not be obstructive. Strength checks do not need to be performed for commercially purchased sanitizers that have been purchased already mixed.
3.08.07	Are foot baths, foamers or dry powdered sanitizing stations provided at entrances to growing areas (where appropriate), and are the stations maintained properly?	3	Foot (boot) stations (foamers, foot dip mats, baths, sprays) should be located in areas when crossing into a "clean" zone from an area of potential contamination (e.g., from outside into the growing area) for some crops (mushrooms, aeroponics). Stations should be checked and replenished as necessary to ensure effectiveness. This question should be scored based on auditor discretion, considering the risk of the products/processes. N/A where there are no foot baths, foamers or dry powdered sanitizing stations when it is not a requirement for the operation.
3.08.08	Are workers' fingernails clean, short and free of nail polish?	5	Fingernails can harbor dirt and debris and can be a source of cross contamination. Therefore, nails should be clean and short to reduce the risk of cross contamination. Fingernail polish and false nails should not be worn, even when gloves are worn.
3.08.09 ⚠	Are workers who are working directly or indirectly with food, free from signs of boils, sores, open wounds and are not exhibiting signs of foodborne illness?	10 ⚠	Workers who have exposed boils, sores, exposed infected wounds, foodborne illness or any other source of abnormal microbial contamination should not be allowed to work in contact with the product, packaging or food contact surfaces.
3.08.10	Is jewelry confined to a plain wedding band and watches, studs, false eyelashes, etc., are not worn?	5	Workers are not observed wearing jewelry (including earrings, necklaces, bracelets, rings with stones, rings or studs in nose, lip and eyebrow, watches) in the facility. Plain wedding bands are the only exception. Other examples of foreign items maybe a source of foreign material contamination include studs, false finger nails and finger nail polish, false eye lashes, eye lash extensions and badges.
3.08.11	Are all workers wearing protective outer garments suitable for the operation (e.g., appropriate clean clothes, smocks, aprons, sleeves and non-latex gloves)?	5	Workers should not wear personal clothes with sequins, pom-poms, fur, etc. No sleeveless tops without an over garment. Where dedicated protective clothing is not required/worn, it must be clear that outer street clothes are clean and not a potential source of contamination. If required, the policy should consider customer requirements, production risk, product type, etc.
3.08.11a	Do workers remove protective outer garments (e.g., smocks, aprons, sleeves, and gloves) when on break, before using the toilets and when going home at the end of their shift?	5	When worn, protective clothing (e.g., aprons, smocks, sleeves and gloves) should be removed when workers leave the work area (e.g., when they go to the toilet facility, lunchroom, outside, etc.). Workers cannot smoke, eat, go outside the building or use the restroom while wearing these garments.
3.08.11b	Is there a designated area for workers to leave protective outer garments (e.g., smocks, aprons, sleeves, and gloves) when on break and before using the toilets?	5	There should be a designated area for workers to leave protective clothing when they are worn (e.g., aprons, smocks, sleeves and gloves). Workers are observed using the designated area when they leave the work area (e.g., when they go to the toilet facility, lunchroom, outside, etc.).
3.08.12	Are worker personal items being stored appropriately (i.e. not in the growing areas(s) or material storage areas)?	5	Workers should have a designated area for storing personal items such as coats, shoes, purses, medication, phones, etc. Areas set aside for workers' personal items should be far enough away from growing area(s) and material storage area(s) to prevent contamination and avoid food defense risks.
3.08.13 ⚠	Is smoking, eating, chewing and drinking confined to designated areas, and spitting is prohibited in all areas?	5 ⚠	Smoking, chewing tobacco, chewing gum, drinking and eating is permitted in designated areas that are away from growing and storage areas. Spitting should be prohibited in all areas. Smoking should not be permitted in eating and drinking areas.

3.08.14	Is fresh potable drinking water readily accessible to workers?	10	Fresh potable water meeting the quality standards for drinking water should be provided and placed in locations readily accessible to all workers on-site to prevent dehydration. The term "potable" meaning that the water is of drinking water quality (e.g., the EPA Drinking Water Standard or equivalent). Auditors should verbally verify the source of the water at the time of the audit. If water containers are used, they should be maintained in a clean condition, free from residues and contamination to ensure workers are not adversely affected by contaminated water from unclean containers. If there is evidence (i.e. visual observation or documentation) the water is coming from a questionable source, the auditor should review water quality test results.
3.08.14a	Are single use cups provided (unless a drinking fountain is used) and made available near the drinking water?	5	Single-use cups should be provided so that cross contamination issues are avoided from person to person. Examples include single-use cups, drinking fountains, etc. Common drinking cups and other common utensils are prohibited.
3.08.15	Are first aid kits adequately stocked and readily available?	5	First aid kit(s) should be adequately supplied to reflect the kinds of injuries that occur (including any chemicals stored on-site) and should be stored in an area where they are readily available for emergency access. Date-coded materials should be within dates of expiration. Gloves should be worn over all band aids on hands.
3.08.16	Are there adequate trash cans placed in suitable locations?	5	There should be adequate measures for trash disposal so that the growing and storage areas are not contaminated. Containers (e.g. dumpsters, cans) should be available and placed in suitable locations for the disposal of waste and trash, e.g. near toilets.

AGRONOMIC INPUTS

Question No.	Question	Total Points	Expectation
3.09.01	Is human sewage sludge (biosolids) used as an input? Information gathering question.	0	The use of sewage sludge (biosolids), which are by-products of wastewater treatment is an automatic failure for indoor growing operations, and also where specifically prohibited under best management practices (e.g., LGMA, T-GAPs). The use of untreated biosolids is prohibited. Information gathering question.
3.09.01a ⚠	Is fertilizer being used where the country regulations/ guidelines ban the use of such materials (e.g., Californian Leafy Green Commodity Specific Guidelines)? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Some commodity specific guidelines have rules regarding the use of specific fertilizer types, e.g. Californian Leafy Green Commodity Specific Guidelines. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.09.01b ⚠	Are there fertilizer use records available for each growing area, including application records?	15 ⚠	Records should be legible and at least detail date of application, type of fertilizer, amount, method of application (drip, bulk, etc.), where it was applied and operator name. There should be sufficient identification information in the records that would make it possible to trace an application back to the site if needed. There should be an interval between application and harvest of at least 45 days for non-synthetic crop treatments and compost, and an interval of at least 120 days (but ideally 9 months) for untreated animal manure.
3.09.01c ⚠	Are there Certificate(s) of Analysis (CoA), specifications, product label or other documents available for review provided by the supplier stating the components of the material?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other formal documentation from the fertilizer manufacturer(s) or supplier(s) should be current and state any inert or active ingredient substances used as "fillers" (e.g., clay pellets, granular limestone). Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn).

3.09.01d ⚠	Are there Certificate(s) of Analysis (CoA) from the supplier(s) that cover pathogen testing (plus any other legally/best practice required testing) and does the grower have relevant letters of guarantee regarding supplier SOPs and logs?	15 ⚠	Certificates of analysis should be available for each lot (containing animal materials) used. As a minimum, microbial testing should include *Salmonella spp., Listeria monocytogenes* and *E. coli* O157:H7 for non-synthetic crop treatments (e.g., compost teas, fish emulsions, fish meal, blood meal, "bio fertilizers") and for animal-based compost, using approved sampling and testing methods (e.g., AOAC and an accredited laboratory). Where legally allowed, a reduced sampling rate is possible if the material is produced by the auditee (e.g. mushroom growing operations with in-house compost production) and has been through a physical/chemical/biological process to inactivate human pathogens and the auditee has validation study documentation that shows that the material is safe and proper process control records (e.g., time/temperature records and calibration records, such as, temperature probe) are maintained and available during the audit. Validation studies must be applicable to the situation at hand and care should be taken not to over extrapolate. All local and national legislation should also be followed. The grower should have proof that compost suppliers have cross contamination SOPs and temperature/turning logs.
3.09.01e ⚠	Are there Certificate(s) of Analysis (CoA), letters of guarantee or other documents from the supplier(s) that cover heavy metal testing?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other documents should be available from the crop treatment supplier(s) that cover heavy metal testing. Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn).
3.09.02	Is compost produced from animal derived materials used as an input? Information gathering question.	0	This question is specifically targeting compost produced from raw animal manures, as opposed to green waste. Information gathering question.
3.09.02a ⚠	Is fertilizer being used where the country regulations/ guidelines ban the use of such materials (e.g., Californian Leafy Green Commodity Specific Guidelines)? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Some commodity specific guidelines have rules regarding the use of specific fertilizer types, e.g. Californian Leafy Green Commodity Specific Guidelines. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.09.02b ⚠	Are there fertilizer use records available for each growing area, including application records?	15 ⚠	Records should be legible and at least detail date of application, type of fertilizer, amount, method of application (drip, bulk, etc.), where it was applied and operator name. There should be sufficient identification information in the records that would make it possible to trace an application back to the site if needed. There should be an interval between application and harvest of at least 45 days for non-synthetic crop treatments and compost, and an interval of at least 120 days (but ideally 9 months) for untreated animal manure.
3.09.02c ⚠	Are there Certificate(s) of Analysis (CoA), specifications, product label or other documents available for review provided by the supplier stating the components of the material?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other formal documentation from the fertilizer manufacturer(s) or supplier(s) should be current and state any inert or active ingredient substances used as "fillers" (e.g., clay pellets, granular limestone). Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn)).

3.09.02d ⚠	Are there Certificate(s) of Analysis (CoA) from the supplier(s) that cover pathogen testing (plus any other legally/best practice required testing) and does the grower have relevant letters of guarantee regarding supplier SOPs and logs?	15 ⚠	Certificates of analysis should be available for each lot (containing animal materials) used. As a minimum, microbial testing should include *Salmonella spp., Listeria monocytogenes* and *E. coli* O157:H7 for non-synthetic crop treatments (e.g., compost teas, fish emulsions, fish meal, blood meal, "bio fertilizers") and for animal-based compost, using approved sampling and testing methods (e.g., AOAC and an accredited laboratory). Where legally allowed, a reduced sampling rate is possible if the material is produced by the auditee (e.g. mushroom growing operations with in-house compost production) and has been through a physical/chemical/biological process to inactivate human pathogens and the auditee has validation study documentation that shows that the material is safe and proper process control records (e.g., time/temperature records and calibration records, such as, temperature probe) are maintained and available during the audit. Validation studies must be applicable to the situation at hand and care should be taken not to over extrapolate. All local and national legislation should also be followed. The grower should have proof that compost suppliers have cross contamination SOPs and temperature/turning logs.
3.09.02e ⚠	Are there Certificate(s) of Analysis (CoA), letters of guarantee or other documents from the supplier(s) that cover heavy metal testing?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other documents should be available from the crop treatment supplier(s) that cover heavy metal testing. Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn)).
3.09.03	Is untreated animal manure used as an input (e.g., raw manure &/or uncomposted, incompletely composted animal manure, green waste, non-thermally treated animal manure)? Information gathering question.	0	Untreated animal manure refers to manure that is raw and has not gone through a treatment process. Examples include raw manure and/or uncomposted, incompletely composted animal manure and/or green waste or non-thermally treated animal manure. Untreated animal manure should not be used in indoor growing operations or where prohibited under best management practices. Information gathering question.
3.09.03a ⚠	Is fertilizer being used where the country regulations/ guidelines ban the use of such materials (e.g., Californian Leafy Green Commodity Specific Guidelines)? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Some commodity specific guidelines have rules regarding the use of specific fertilizer types, e.g. Californian Leafy Green Commodity Specific Guidelines. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.09.03b ⚠	Are there fertilizer use records available for each growing area, including application records?	15 ⚠	Records should be legible and at least detail date of application, type of fertilizer, amount, method of application (drip, bulk, etc.), where it was applied and operator name. There should be sufficient identification information in the records that would make it possible to trace an application back to the site if needed. There should be an interval between application and harvest of at least 45 days for non-synthetic crop treatments and compost, and an interval of at least 120 days (but ideally 9 months) for untreated animal manure.
3.09.03c ⚠	Are there Certificate(s) of Analysis (CoA), specifications, product label or other documents available for review provided by the supplier stating the components of the material?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other formal documentation from the fertilizer manufacturer(s) or supplier(s) should be current and state any inert or active ingredient substances used as "fillers" (e.g., clay pellets, granular limestone). Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn).
3.09.03d ⚠	Are there Certificate(s) of Analysis (CoA), letters of guarantee or other documents from the supplier(s) that cover heavy metal testing?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other documents should be available from the crop treatment supplier(s) that cover heavy metal testing. Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn).

3.09.04	Are other non-synthetic crop treatments used as an input (e.g., compost teas, fish emulsions, fish meal, blood meal, bio-fertilizers, etc.)? Information gathering question.	0	Examples include but are not limited to compost teas (also known as agricultural teas), fish emulsions, fish meal, blood meal, inoculants (beneficial microbes), and "bio fertilizers" that are produced from animal materials. Information gathering question.
3.09.04a ⚠	Is fertilizer being used where the country regulations/ guidelines ban the use of such materials (e.g., Californian Leafy Green Commodity Specific Guidelines)? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Some commodity specific guidelines have rules regarding the use of specific fertilizer types, e.g. Californian Leafy Green Commodity Specific Guidelines. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.09.04b ⚠	Are there fertilizer use records available for each growing area, including application records?	15 ⚠	Records should be legible and at least detail date of application, type of fertilizer, amount, method of application (drip, bulk, etc.), where it was applied and operator name. There should be sufficient identification information in the records that would make it possible to trace an application back to the site if needed. There should be an interval between application and harvest of at least 45 days for non-synthetic crop treatments and compost, and an interval of at least 120 days (but ideally 9 months) for untreated animal manure.
3.09.04c ⚠	Are there Certificate(s) of Analysis (CoA), specifications, product label or other documents available for review provided by the supplier stating the components of the material?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other formal documentation from the fertilizer manufacturer(s) or supplier(s) should be current and state any inert or active ingredient substances used as "fillers" (e.g., clay pellets, granular limestone). Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn).
3.09.04d ⚠	Are there Certificate(s) of Analysis (CoA) from the supplier(s) that cover pathogen testing (plus any other legally/best practice required testing) and does the grower have relevant letters of guarantee regarding supplier SOPs and logs?	15 ⚠	Certificates of analysis should be available for each lot (containing animal materials) used. As a minimum, microbial testing should include *Salmonella spp., Listeria monocytogenes* and *E. coli* O157:H7 for non-synthetic crop treatments (e.g., compost teas, fish emulsions, fish meal, blood meal, "bio fertilizers") and for animal-based compost, using approved sampling and testing methods (e.g., AOAC and an accredited laboratory). Where legally allowed, a reduced sampling rate is possible if the material is produced by the auditee (e.g. mushroom growing operations with in-house compost production) and has been through a physical/chemical/biological process to inactivate human pathogens and the auditee has validation study documentation that shows that the material is safe and proper process control records (e.g., time/temperature records and calibration records, such as, temperature probe) are maintained and available during the audit. Validation studies must be applicable to the situation at hand and care should be taken not to over extrapolate. All local and national legislation should also be followed. The grower should have proof that compost suppliers have cross contamination SOPs and temperature/turning logs.
3.09.04e ⚠	Are there Certificate(s) of Analysis (CoA), letters of guarantee or other documents from the supplier(s) that cover heavy metal testing?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other documents should be available from the crop treatment supplier(s) that cover heavy metal testing. Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn).
3.09.05	Are soil or substrate amendments used as an input (e.g., plant by-products, humates, seaweed, inoculants, and conditioner, etc.)? Information gathering question.	0	This refers to soil or substrate amendments (except inorganic nutrients/fertilizers) used that do not contain animal products and/or animal manures. Examples include but are not limited to plant by-products (e.g. coir), humates (e.g. peat), seaweed, and conditioners (e.g. vermiculite, etc.. Information gathering question.

3.09.05a ⚠	Is fertilizer being used where the country regulations/ guidelines ban the use of such materials (e.g., Californian Leafy Green Commodity Specific Guidelines)? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Some commodity specific guidelines have rules regarding the use of specific fertilizer types, e.g. Californian Leafy Green Commodity Specific Guidelines. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.09.05b ⚠	Are there fertilizer use records available for each growing area, including application records?	15 ⚠	Records should be legible and at least detail date of application, type of fertilizer, amount, method of application (drip, bulk, etc.), where it was applied and operator name. There should be sufficient identification information in the records that would make it possible to trace an application back to the site if needed.
3.09.05c ⚠	Are there Certificate(s) of Analysis (CoA), specifications, product label or other documents available for review provided by the supplier stating the components of the material?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other formal documentation from the fertilizer manufacturer(s) or supplier(s) should be current and state any inert or active ingredient substances used as "fillers" (e.g., clay pellets, granular limestone). Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn)).
3.09.05d ⚠	Are there Certificate(s) of Analysis (CoA) and/or letters of guarantee stating that the materials used are free from animal products and/or animal manures?	15 ⚠	There should be Certificate(s) of Analysis (CoA) and/or letters of guarantee from the fertilizer supplier, stating that the materials they are supplying are free from animal products and/or animal manures. A statement of ingredients or letter from suppliers attesting this fact is acceptable. Auditor should match the names of the materials being used with the CoA's and/letters of guarantee.
3.09.06	Are inorganic fertilizers used as an input (e.g., ammonium nitrate, ammonium sulfate, chemically synthesized urea, etc.)? Information gathering question.	0	Examples of manufactured inorganic fertilizers include ammonium nitrate, ammonium sulfate, chemically synthesized urea, etc. Information gathering question.
3.09.06a ⚠	Is fertilizer being used where the country regulations/ guidelines ban the use of such materials (e.g., Californian Leafy Green Commodity Specific Guidelines)? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Some commodity specific guidelines have rules regarding the use of specific fertilizer types, e.g. Californian Leafy Green Commodity Specific Guidelines. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.09.06b ⚠	Are there fertilizer use records available for each growing area, including application records?	15 ⚠	Records should be legible and at least detail date of application, type of fertilizer, amount, method of application (drip, bulk, etc.), where it was applied and operator name. There should be sufficient identification information in the records that would make it possible to trace an application back to the site if needed.
3.09.06c ⚠	Are there Certificate(s) of Analysis (CoA), specifications, product label or other documents available for review provided by the supplier stating the components of the material?	10 ⚠	Certificate(s) of Analysis (CoA), letters of guarantee or other formal documentation from the fertilizer manufacturer(s) or supplier(s) should be current and state any inert or active ingredient substances used as "fillers" (e.g., clay pellets, granular limestone). Concerns are for heavy metals that may affect human health (e.g. Arsenic (As), Cadmium (Cd), Chromium (Cr), Copper (Cu), Lead (Pb), Mercury (Hg), Molybdenum (Mo), Nickel (Ni), Selenium (Se), Zinc (Zn)).

IRRIGATION / WATER USE

Question No.	Question	Total Points	Expectation
3.10.01	Is municipal/district water used in the growing operation?	0	informational gathering question.
3.10.01	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	Informational gathering question.

3.10.01	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	Informational gathering question.
3.10.01	Does the water come in contact with the edible portion of the crop?	0	Informational gathering question.
3.10.01a ⚠	Are generic *E. coli* tests conducted on the water (taken from the closest practical point of use) at the required and/or expected frequency? **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	Water samples should be taken from as close to the point of use as is practical. At least one sample per distribution system is required. If there are multiple sampling points in a distribution system, then samples are taken from a different location each test (randomize or rotate locations). For farm and indoor agriculture operations, one sample per water source is collected and tested prior to use if >60 days since the last test of the water source. Additional samples are taken at least monthly during use of the water source. A less frequent testing is acceptable if supported by a valid documented risk assessment although there should be at least one water test per season. Where there are more stringent federal, national or local requirements, these requirements should be followed. **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.10.01b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	There should be documented procedures in place detailing how water samples are taken in the growing area, including stating how samples should be identified i.e. clearly naming the location that the sample was taken, the water source and the date (this is important in order to be able to calculate geometric means). Samples should be taken at a point as close to the point of use as possible where water contacts the crop, so as to test both the water source and the water distribution system.
3.10.01c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	Written procedures (SOPs) should exist covering corrective measures not only for the discovery of unsuitable or abnormal water test results but also as a preparation on how to handle such findings.
3.10.01d ⚠	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15 ⚠	For generic *E. coli* (unless more stringent guidelines/laws in existence) <126MPN (or CFU)/100mL (rolling geometric mean n=5) and <235MPN (or CFU)/100mL for any single sample. Where thresholds have been exceeded, there should be recorded corrective actions that prevent or mitigate product contamination, including investigations, water retests, and if required, crop testing (*E. coli* O157:H7 and *Salmonella* - zero tolerance). Failure to take corrective actions, prevent or mitigate product contamination when there is evidence of high levels or an upward trend of *E. coli* may result in an automatic failure of the audit. For farms or indoor agriculture operations following the FDA's Produce Safety Rule, the operation needs to ensure they are meeting the requirements for samples to calculate the Geometric Mean (GM) and Statistical Threshold (STV).
3.10.01e ⚠	Where anti-microbial water treatments (e.g. chlorination, U.V., ozone, etc.) are used, are there records of the monitoring frequencies, results and where necessary the corrective actions?	15 ⚠	Where any water treatment is performed at the source (e.g., well, canal, holding tank) this should be monitored. The strength of anti-microbial chemicals should be checked using an appropriate method for the anti-microbial in use (e.g., chemical reaction based test, test probe, or as recommended by the disinfectant supplier). If using an anti-microbial treatment system (e.g. chlorination), there should be monitoring logs completed on at least a daily basis when the system is being used. Any well "shocking" should be recorded.
3.10.01f	Are there records for periodic visual inspection of the water source with corrective actions (where necessary)?	5	"Records" may include calendar books with commentary regarding what was checked, the condition, unusual occurrences (e.g. issues regarding well cap, well casing, seals, piping tanks, treatment equipment, cross connections, trash, animal presence, pooled water, etc.), and any action taken.

3.10.02	Is well water used in the growing operation?	0	Informational gathering question.
3.10.02	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	Informational gathering question.
3.10.02	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	Informational gathering question.
3.10.02	Does the water come in contact with the edible portion of the crop?	0	Informational gathering question.
3.10.02a ⚠	Are generic *E. coli* tests conducted on the water (taken from the closest practical point of use) at the required and/or expected frequency? **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	Water samples should be taken from as close to the point of use as is practical. At least one sample per distribution system is required. If there are multiple sampling points in a distribution system, then samples are taken from a different location each test (randomize or rotate locations). For farm and indoor agriculture operations, one sample per water source is collected and tested prior to use if >60 days since the last test of the water source. Additional samples are taken at least monthly during use of the water source. A less frequent testing is acceptable if supported by a valid documented risk assessment although there should be at least one water test per season. Where there are more stringent federal, national or local requirements, these requirements should be followed. **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.10.02b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	There should be documented procedures in place detailing how water samples are taken in the growing area, including stating how samples should be identified i.e. clearly naming the location that the sample was taken, the water source and the date (this is important in order to be able to calculate geometric means). Samples should be taken at a point as close to the point of use as possible where water contacts the crop, so as to test both the water source and the water distribution system.
3.10.02c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	Written procedures (SOPs) should exist covering corrective measures not only for the discovery of unsuitable or abnormal water test results but also as a preparation on how to handle such findings.
3.10.02d ⚠	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15 ⚠	For generic *E. coli* (unless more stringent guidelines/laws in existence) <126MPN (or CFU)/100mL (rolling geometric mean n=5) and <235MPN (or CFU)/100mL for any single sample. Where thresholds have been exceeded, there should be recorded corrective actions that prevent or mitigate product contamination, including investigations, water retests, and if required, crop testing (*E. coli* O157:H7 and *Salmonella* - zero tolerance). Failure to take corrective actions, prevent or mitigate product contamination when there is evidence of high levels or an upward trend of *E. coli* may result in an automatic failure of the audit. For farms or indoor agriculture operations following the FDA's Produce Safety Rule, the operation needs to ensure they are meeting the requirements for samples to calculate the Geometric Mean (GM) and Statistical Threshold (STV).
3.10.02e ⚠	Where anti-microbial water treatments (e.g. chlorination, U.V., ozone, etc.) are used, are there records of the monitoring frequencies, results and where necessary the corrective actions?	15 ⚠	Where any water treatment is performed at the source (e.g., well, canal, holding tank) this should be monitored. The strength of anti-microbial chemicals should be checked using an appropriate method for the anti-microbial in use (e.g., chemical reaction based test, test probe, or as recommended by the disinfectant supplier). If using an anti-microbial treatment system (e.g. chlorination), there should be monitoring logs completed on at least a daily basis when the system is being used. Any well "shocking" should be recorded.

3.10.02f	Are there records for periodic visual inspection of the water source with corrective actions (where necessary)?	5	"Records" may include calendar books with commentary regarding what was checked, the condition, unusual occurrences, and any action taken. If using a disinfection injection system (e.g. chlorination), there should be monitoring logs completed on at least a daily basis. Any well "shocking" should be recorded. The appropriate support documentation should be available for review.
3.10.03	Is non-flowing surface water (e.g., pond, reservoir, watershed) used in the operation?	0	Information gathering question.
3.10.03	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	Informational gathering question.
3.10.03	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	Informational gathering question.
3.10.03	Does the water come in contact with the edible portion of the crop?	0	Informational gathering question.
3.10.03a ⚠	Are generic *E. coli* tests conducted on the water (taken from the closest practical point of use) at the required and/or expected frequency? **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	Water samples should be taken from as close to the point of use as is practical. At least one sample per distribution system is required. If there are multiple sampling points in a distribution system, then samples are taken from a different location each test (randomize or rotate locations). For farm and indoor agriculture operations, one sample per water source is collected and tested prior to use if >60 days since the last test of the water source. Additional samples are taken at least monthly during use of the water source. A less frequent testing is acceptable if supported by a valid documented risk assessment although there should be at least one water test per season. Where there are more stringent federal, national or local requirements, these requirements should be followed. **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.10.03b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	There should be documented procedures in place detailing how water samples are taken in the growing area, including stating how samples should be identified i.e. clearly naming the location that the sample was taken, the water source and the date (this is important in order to be able to calculate geometric means). Samples should be taken at a point as close to the point of use as possible where water contacts the crop, so as to test both the water source and the water distribution system.
3.10.03c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	Written procedures (SOPs) should exist covering corrective measures not only for the discovery of unsuitable or abnormal water test results but also as a preparation on how to handle such findings.
3.10.03d ⚠	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15 ⚠	For generic *E. coli* (unless more stringent guidelines/laws in existence) <126MPN (or CFU)/100mL (rolling geometric mean n=5) and <235MPN (or CFU)/100mL for any single sample. Where thresholds have been exceeded, there should be recorded corrective actions that prevent or mitigate product contamination, including investigations, water retests, and if required, crop testing (*E. coli* O157:H7 and *Salmonella* - zero tolerance). Failure to take corrective actions, prevent or mitigate product contamination when there is evidence of high levels or an upward trend of *E. coli* may result in an automatic failure of the audit. For farms or indoor agriculture operations following the FDA's Produce Safety Rule, the operation needs to ensure they are meeting the requirements for samples to calculate the Geometric Mean (GM) and Statistical Threshold (STV).

3.10.03e ⚠	Where anti-microbial water treatments (e.g. chlorination, U.V., ozone, etc.) are used, are there records of the monitoring frequencies, results and where necessary the corrective actions?	15 ⚠	Where any water treatment is performed at the source (e.g., well, canal, holding tank) this should be monitored. The strength of anti-microbial chemicals should be checked using an appropriate method for the anti-microbial in use (e.g., chemical reaction based test, test probe, or as recommended by the disinfectant supplier). If using an anti-microbial treatment system (e.g. chlorination), there should be monitoring logs completed on at least a daily basis when the system is being used. Any well "shocking" should be recorded.
3.10.03f	Are there records for periodic visual inspection of the water source with corrective actions (where necessary)?	5	"Records" may include calendar books with commentary regarding what was checked, the condition, unusual occurrences (e.g. issues regarding well cap, well casing, seals, piping tanks, treatment equipment, cross connections, trash, animal presence, pooled water, etc.), and any action taken.
3.10.04	Is open flowing surface water (e.g., river, canal, ditch) used in the operation?	5	Information gathering question.
3.10.04	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	Informational gathering question.
3.10.04	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	Informational gathering question.
3.10.04	Does the water come in contact with the edible portion of the crop?	0	Informational gathering question.
3.10.04a ⚠	Are generic *E. coli* tests conducted on the water (taken from the closest practical point of use) at the required and/or expected frequency? **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	Water samples should be taken from as close to the point of use as is practical. At least one sample per distribution system is required. If there are multiple sampling points in a distribution system, then samples are taken from a different location each test (randomize or rotate locations). For farm and indoor agriculture operations, one sample per water source is collected and tested prior to use if >60 days since the last test of the water source. Additional samples are taken at least monthly during use of the water source. A less frequent testing is acceptable if supported by a valid documented risk assessment although there should be at least one water test per season. Where there are more stringent federal, national or local requirements, these requirements should be followed. **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.10.04b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	There should be documented procedures in place detailing how water samples are taken in the growing area, including stating how samples should be identified i.e. clearly naming the location that the sample was taken, the water source and the date (this is important in order to be able to calculate geometric means). Samples should be taken at a point as close to the point of use as possible where water contacts the crop, so as to test both the water source and the water distribution system.
3.10.04c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	Written procedures (SOPs) should exist covering corrective measures not only for the discovery of unsuitable or abnormal water test results but also as a preparation on how to handle such findings.

3.10.04d ⚠	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15 ⚠	For generic *E. coli* (unless more stringent guidelines/laws in existence) <126MPN (or CFU)/100mL (rolling geometric mean n=5) and <235MPN (or CFU)/100mL for any single sample. Where thresholds have been exceeded, there should be recorded corrective actions that prevent or mitigate product contamination, including investigations, water retests, and if required, crop testing (*E. coli* O157:H7 and *Salmonella* - zero tolerance). Failure to take corrective actions, prevent or mitigate product contamination when there is evidence of high levels or an upward trend of *E. coli* may result in an automatic failure of the audit. For farms or indoor agriculture operations following the FDA's Produce Safety Rule, the operation needs to ensure they are meeting the requirements for samples to calculate the Geometric Mean (GM) and Statistical Threshold (STV).
3.10.04e ⚠	Where anti-microbial water treatments (e.g. chlorination, U.V., ozone, etc.) are used, are there records of the monitoring frequencies, results and where necessary the corrective actions?	15 ⚠	Where any water treatment is performed at the source (e.g., well, canal, holding tank) this should be monitored. The strength of anti-microbial chemicals should be checked using an appropriate method for the anti-microbial in use (e.g., chemical reaction based test, test probe, or as recommended by the disinfectant supplier). If using an anti-microbial treatment system (e.g. chlorination), there should be monitoring logs completed on at least a daily basis when the system is being used. Any well "shocking" should be recorded.
3.10.04f	Are there records for periodic visual inspection of the water source with corrective actions (where necessary)?	5	"Records" may include calendar books with commentary regarding what was checked, the condition, unusual occurrences (e.g. issues regarding well cap, well casing, seals, piping tanks, treatment equipment, cross connections, trash, animal presence, pooled water, etc.), and any action taken.
3.10.05	Is reclaimed water used in the operation? Note, this refers to wastewater that has gone through a treatment process.	0	Information gathering question. Reclaimed water should be treated with adequate disinfection systems and tested frequently, ideally under the direction of a water reclamation authority or other management body. Reclaimed water should be subject to applicable local and national regulations and standards including World Health Organisation (WHO) guidelines for the safe use of wastewater, excreta and greywater in agriculture. Prior to using this water for agricultural purposes, growers should check with regulatory bodies to determine the appropriate parameters and tolerances to be used.
3.10.05	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	Information gathering question.
3.10.05	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	Informational gathering question.
3.10.05	Does the water come in contact with the edible portion of the crop?	0	Informational gathering question.
3.10.05a ⚠	Are generic *E. coli* tests conducted on the water (taken from the closest practical point of use) at the required and/or expected frequency? **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	Water samples should be taken from as close to the point of use as is practical. At least one sample per distribution system is required. If there are multiple sampling points in a distribution system, then samples are taken from a different location each test (randomize or rotate locations). For farm and indoor agriculture operations, one sample per water source is collected and tested prior to use if >60 days since the last test of the water source. Additional samples are taken at least monthly during use of the water source. A less frequent testing is acceptable if supported by a valid documented risk assessment although there should be at least one water test per season. Where there are more stringent federal, national or local requirements, these requirements should be followed. **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**

3.10.05b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	There should be documented procedures in place detailing how water samples are taken in the growing area, including stating how samples should be identified i.e. clearly naming the location that the sample was taken, the water source and the date (this is important in order to be able to calculate geometric means). Samples should be taken at a point as close to the point of use as possible where water contacts the crop, so as to test both the water source and the water distribution system.
3.10.05c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	Written procedures (SOPs) should exist covering corrective measures not only for the discovery of unsuitable or abnormal water test results but also as a preparation on how to handle such findings.
3.10.05d ⚠	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15 ⚠	For generic *E. coli* (unless more stringent guidelines/laws in existence) <126MPN (or CFU)/100mL (rolling geometric mean n=5) and <235MPN (or CFU)/100mL for any single sample. Where thresholds have been exceeded, there should be recorded corrective actions that prevent or mitigate product contamination, including investigations, water retests, and if required, crop testing (*E. coli* O157:H7 and *Salmonella* - zero tolerance). Failure to take corrective actions, prevent or mitigate product contamination when there is evidence of high levels or an upward trend of *E. coli* may result in an automatic failure of the audit. For farms or indoor agriculture operations following the FDA's Produce Safety Rule, the operation needs to ensure they are meeting the requirements for samples to calculate the Geometric Mean (GM) and Statistical Threshold (STV).
3.10.05e ⚠	Where anti-microbial water treatments (e.g. chlorination, U.V., ozone, etc.) are used, are there records of the monitoring frequencies, results and where necessary the corrective actions?	15 ⚠	Where any water treatment is performed at the source (e.g., well, canal, holding tank) this should be monitored. The strength of anti-microbial chemicals should be checked using an appropriate method for the anti-microbial in use (e.g., chemical reaction based test, test probe, or as recommended by the disinfectant supplier). If using an anti-microbial treatment system (e.g. chlorination), there should be monitoring logs completed on at least a daily basis when the system is being used. Any well "shocking" should be recorded.
3.10.05f	Are there records for periodic visual inspection of the water source with corrective actions (where necessary)?	5	"Records" may include calendar books with commentary regarding what was checked, the condition, unusual occurrences (e.g. issues regarding well cap, well casing, seals, piping tanks, treatment equipment, cross connections, trash, animal presence, pooled water, etc.), and any action taken.
3.10.06	Is tail water (run-off water including hydroponics) used in the operation?	0	Information gathering question. Tail water return systems, including hydroponics, catch spilled or runoff water and pump the water back to the top of the field/growing area.
3.10.06	What is this water source used for (e.g., irrigation, crop protection sprays, fertigation, frost/freeze protection, cooling, dust abatement, etc.)?	0	Information gathering question.
3.10.06	What type of irrigation methods are used (e.g., micro-irrigation, drip, overhead, flood irrigation, furrow irrigation, seepage irrigation, hydroponic (specify type))?	0	Informational gathering question.
3.10.06	Does the water come in contact with the edible portion of the crop?	0	Informational gathering question.

3.10.06a ⚠	Are generic *E. coli* tests conducted on the water (taken from the closest practical point of use) at the required and/or expected frequency? **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	Water samples should be taken from as close to the point of use as is practical. At least one sample per distribution system is required. If there are multiple sampling points in a distribution system, then samples are taken from a different location each test (randomize or rotate locations). For farm and indoor agriculture operations, one sample per water source is collected and tested prior to use if >60 days since the last test of the water source. Additional samples are taken at least monthly during use of the water source. A less frequent testing is acceptable if supported by a valid documented risk assessment although there should be at least one water test per season. Where there are more stringent federal, national or local requirements, these requirements should be followed. **A ZERO POINT (NONCOMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.10.06b	Do written procedures (SOPs) exist covering proper sampling protocols which include where samples should be taken and how samples should be identified?	10	There should be documented procedures in place detailing how water samples are taken in the growing area, including stating how samples should be identified i.e. clearly naming the location that the sample was taken, the water source and the date (this is important in order to be able to calculate geometric means). Samples should be taken at a point as close to the point of use as possible where water contacts the crop, so as to test both the water source and the water distribution system.
3.10.06c	Do written procedures (SOPs) exist covering corrective measures for unsuitable or abnormal water testing results?	10	Written procedures (SOPs) should exist covering corrective measures not only for the discovery of unsuitable or abnormal water test results but also as a preparation on how to handle such findings.
3.10.06d ⚠	If unsuitable or abnormal results have been detected, have documented corrective measures been performed?	15 ⚠	For generic *E. coli* (unless more stringent guidelines/laws in existence) <126MPN (or CFU)/100mL (rolling geometric mean n=5) and <235MPN (or CFU)/100mL for any single sample. Where thresholds have been exceeded, there should be recorded corrective actions that prevent or mitigate product contamination, including investigations, water retests, and if required, crop testing (*E. coli* O157:H7 and *Salmonella* - zero tolerance). Failure to take corrective actions, prevent or mitigate product contamination when there is evidence of high levels or an upward trend of *E. coli* may result in an automatic failure of the audit. For farms or indoor agriculture operations following the FDA's Produce Safety Rule, the operation needs to ensure they are meeting the requirements for samples to calculate the Geometric Mean (GM) and Statistical Threshold (STV).
3.10.06e ⚠	Where anti-microbial water treatments (e.g. chlorination, U.V., ozone, etc.) are used, are there records of the monitoring frequencies, results and where necessary the corrective actions?	15 ⚠	Where any water treatment is performed at the source (e.g., well, canal, holding tank) this should be monitored. The strength of anti-microbial chemicals should be checked using an appropriate method for the anti-microbial in use (e.g., chemical reaction based test, test probe, or as recommended by the disinfectant supplier). If using an anti-microbial treatment system (e.g. chlorination), there should be monitoring logs completed on at least a daily basis when the system is being used. Any well "shocking" should be recorded.
3.10.06f	Are there records for periodic visual inspection of the water source with corrective actions (where necessary)?	5	"Records" may include calendar books with commentary regarding what was checked, the condition, unusual occurrences (e.g. issues regarding well cap, well casing, seals, piping tanks, treatment equipment, cross connections, trash, animal presence, pooled water, etc.), and any action taken.
3.10.07 ⚠	Are there backflow prevention devices on all main lines, including where chemical, fertilizer and pesticide applications are made?	10 ⚠	Water systems should be fitted with backflow prevention devices to prevent contamination of the water supply. Main water lines should be fitted with back-flow protection for the incoming water (no matter what the source). Individual water lines should be fitted with backflow protection where practical.

3.10.08 ⚠	If the operation stores water (tank, cistern, container), is the storage container well maintained?	15 ⚠	Container should be structurally sound with no evidence of damage or rust, no vegetation growing on or in the container. The base of the container should be free from debris and weeds. Access lids are properly secured and any vents, overflow and drains are screened. Air gaps are present and should be at least twice the diameter of the water supply inlet and not be less than 25 mm (1 inch).

PESTICIDE USAGE

Question No.	Question	Total Points	Expectation
3.11.01 ⚠	Are there up-to-date records of all pesticides applied during the growth cycle (including soil and substrate pre-plant treatments)? **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15 ⚠	The growing operation should follow a pesticide application record keeping program that at least includes the following: date and time of application, crop name, treated area size and location (must be traceable), brand/product name, EPA (or equivalent) registration information, active ingredient, amount applied (rate/dosage), applicator identification, pre-harvest interval, restricted entry interval, application equipment identification and target pests. **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.11.02 ⚠	Are all pesticides applied during the growth cycle authorized/registered by the authority/government of the country of production? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Application records should show all pesticides applied during the growth cycle are officially registered by the country of production for the target crop (e.g. EPA in the US, COFEPRIS in Mexico, SAG in Chile, Pest Management Regulatory Agency (PMRA) in Canada). In countries where there is approval for its use, this is acceptable, when the program is operated by the government and considers at a minimum the target crop, pesticide trade name and active ingredient, formulation, dosage, pre-harvest intervals and target pest(s) or in cases where the government authorizes an active ingredient but not a trade name, there must be evidence of compliance with the MRLs of the destination countries for the applied "authorized" active ingredient (see 3.11.05) When pesticide product registration/authorization information does not exist for the target crop in the country of production or there are not enough products registered/ authorized to control a pest or disease (partial registration/authorization), extrapolation is possible if that practice is allowed by the country of production (e.g. in Mexico "Anexo Técnico 1. Requisitos Generales para la Certificación y Reconocimiento de Sistemas de Riesgos de Contaminación (SRRC) Buen Uso y Manejo de Plaguicidas (BUMP) o Buenas Prácticas Agrícolas en la Actividad de Cosecha (BPCo) durante la producción primaria de vegetales – Section 12.3 should be considered. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.11.03 ⚠	Are all pesticides used during the growth cycle applied as recommended/directed in the label? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Application records should show that pesticides used during the growth cycle are applied in accordance with label directions and any federal, state or local regulation(s). In operations applying pesticides "authorized" by the government, where use directions are not in the label, application records should show "authorization program" use/ application directions are followed.
3.11.04 ⚠	Where harvesting is restricted by pre-harvest intervals, are required pre-harvest intervals on product labels, national (e.g., EPA) registration and any federal, state or local regulations and guidelines being adhered to? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15 ⚠	Application and harvest records show pre-harvest intervals on product labels, national (e.g., EPA) registration and any federal, state or local regulations and guidelines are being adhered to. In operations applying pesticides "authorized" by the government, where use directions are not in the label, application and harvest records show the "authorization program" directions for pre-harvest intervals are followed. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**

3.11.05 ⚠	Where products are destined for export, is there information for pesticide Maximum Residue Limits (MRLs) compliance considering country of destination, target crop(s), and active ingredients applied?	15 ⚠	Where products are destined for export, the operation should have documented evidence about the MRL requirements for each country of destination for each pesticide (active ingredient) applied during the growth cycle. This assumes that grower is meeting country of origin MRL and label requirements. If there is no MRL defined by the country of destination for any active ingredient applied, the operation should have documented evidence of the applicable regulations in that country (e.g. default MRL, Codex Alimentarius, non-detectable, etc.). In the case where the MRLs have been standardized or harmonized for a group of countries (i.e. European Union) it is acceptable that the operation demonstrate compliance by referencing the "list" of MRLs issued from the formal body that represents those countries for this purpose. This question is Not Applicable if the product is only sold in the country of production (domestic market).
3.11.06 ⚠	Where products are destined for export, is there evidence that Maximum Residue Limits (MRLs) of the intended markets are met?	15 ⚠	Maximum Residue Limits (MRLs) analysis should be performed when the MRLs of the destination countries are lower (stricter) than the country of production. This assumes that grower is meeting country of origin MRL and label requirements. MRL test results and records should demonstrate that products/crops meet MRL regulations in those intended markets and any non-conforming product is diverted from those markets. This question is Not Applicable if the product is only sold in the country of production (domestic market).
3.11.07 ⚠	Is there a documented procedure for the pesticide applications, considering mixing and loading, applying, and equipment cleaning?	15 ⚠	There should be a documented procedure for pesticide applications, specifically mixing and loading, application procedures and equipment cleaning. The procedure should adhere to the product label and include: requiring activity to be in a well-ventilated, well-lit area away from unprotected people, food and other items that might be contaminated; necessary PPE, re-entry intervals, excessive winds, posting of treated areas, etc.; how to rinse and clean pesticide equipment including measuring devices, mixing containers and application equipment.
3.11.08 ⚠	Is there documentation that shows the individual(s) making decisions for pesticide applications is competent?	15 ⚠	Current valid certificates, licenses, another form of proof of training recognized by prevailing national/local standards and guidelines should be available for the individual(s) making decisions on pesticide applications (e.g., choice of pesticides, application timings, rates, etc.).
3.11.09 ⚠	Is there documentation that shows that individuals who handle pesticide materials are trained and are under the supervision of a trained person?	15 ⚠	All workers who handle pesticides must have current certificates, licenses, or other forms of proof of training (recognized by prevailing national/local standards and guidelines) qualifying them to do so independently or they must have proof of training (in-house or external) and be under the supervision of a worker who can do so independently.

Where laws, commodity specific guidelines and/or best practice recommendations exist and are derived from a reputable source, then these practices and parameters should be used. Audit users should allow a degree of risk association if laws, guidelines, best practices, etc., have not been documented.

⚠ Caution symbol questions are of essential importance to food safety due to potential concern(s) regarding the conformity of the product/processes or there are legal concerns if not in total compliance. Please refer to **PrimusGFS General Regulations - Appendix 3 Guidance for Closure of Deficiencies and Corrective Actions** for details.

Document Revision History		
Date	Rev.#	Description
1/19/2021	0	Initial
7/20/2021	1	Changes to questions 3.02.03a, 3.09.01 & 3.10.05.
8/27/2021	2	Removed text on question 3.02.04