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primusGFS

2019

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

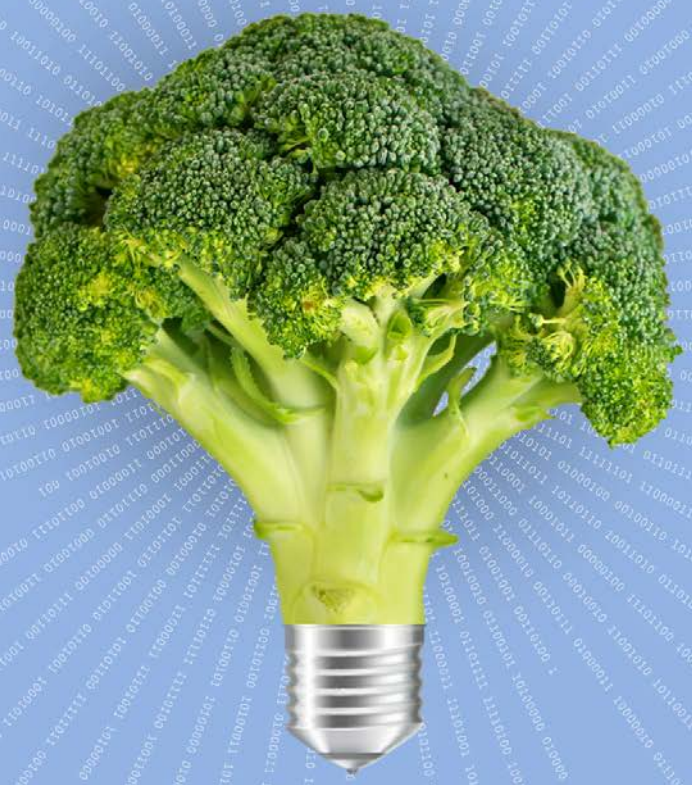
QUESTIONS & EXPECTATIONS

PrimusGFS v3.1

MODULE 3

INDOOR AGRICULTURE

Good Agricultural Practices Requirements



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Introduction

PrimusGFS v3.1

Acknowledgements

Azzule Systems gained valuable feedback from several of our clients, including indoor agricultural operations in Mexico, as well as from Certification Bodies, Training Centers, and industry experts at-large during the implementation of PrimusGFS v3.0. 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 v3.1.

Version 3.1 satisfies the needs of users from a local to a global scale with flexible modules and a variety of addenda developed to ensure strength in programs, regulatory compliance, and marketability. 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 v3.1: Our Certification Bodies and Training Centers, and in alphabetical order, Ashley Bell (Cloche Technical Solutions), Monica Canales (Cal-Pac Food Safety), Cailin Colwell (Pasquinelli Produce), Megan Crivelli (The Produce Nerd), Debra Garrison (Debra Garrison Consulting, LLC), Pavel Gonzalez, Elena Jimenez (Sunkist Growers, Inc.), Clarisa Molina (Ser-Ka Solutions), Hector Pedraza (Robinson Fresh), Tina Price (T. Price & Associates, LLC), Jeff Saleen (Bonipak Produce), Sarah Schlicher, Bruce Wilkins (CoActive Food Group, LLC).

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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 allows 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 v3.1

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 farming 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.

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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 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	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/GMPs and health requirements. 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), 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?	10	A documented risk assessment of the growing area and surrounding areas should be performed and documented annually, and when any changes are made to the growing area, 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 sources (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, prevailing weather conditions or weather events. and any other applicable areas. Farms and indoor agriculture operations following the CA or AZ LGMA should have 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?	10	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.
3.02.04 (New question)	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	Are workers issued non-reproducible identification (e.g., badges, company ID cards, etc.)? Informational Gathering Question.	0	The operation must have a worker access security system in place that could include ID cards (with photo), biometrics, unique assigned passcodes or key fobs (not an exhaustive list). The system employed must provide a unique link between the worker and site/facility access, be revocable upon termination from the company with controls to limit duplication. Agency labor should also have ID cards (such as agency ID's that are checked on arrival). The ID cards, if worn on the outer garments, should be firmly attached so as not to be a food safety hazard. If stored on one's person, this is also acceptable i.e. the ID card can be provided if challenged (if stored in pockets, etc., hand sanitation would be required after showing the ID card, prior to handling product). Companies with less than 20 workers are not expected to have an ID system. Informational Gathering Question
3.02.06	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.
3.02.07	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 is not a risk of contamination to the product, water sources, production areas, equipment, packaging materials, etc.

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 there a documented pest control program, 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 all entry points to growing areas, storage and packaging areas protected to prevent the entry of rodents or birds?	10	The growing, storage and packaging areas should be adequately constructed to prevent entry of rodents or birds. Walls, windows and screens should be maintained, doors 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 audited area free from animal presence and/or animal activity (wild or domestic)? If Yes, go to 3.03.08	15	Animals can represent potential contamination to the growing area, to the crop, to the field 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)
3.03.07a (New Question)	Is there any evidence of fecal matter in the audited area?	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.
3.03.07b (New Question)	Is the fecal matter found in the audited area, a systematic event (not sporadic)? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15	Animal fecal matter has the potential of representing contamination to the product being grown. Produce that has come into direct contact with fecal matter is not to be harvested. A "no harvest zone" 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 a qualified worker and include appropriate corrective and preventative actions. This question is "no" if the grower has already noted this issue and performed adequate corrective actions. Consideration of the maturity stage and type of crop involved is required. If this question is answered Yes, automatic failure of this audit will result. Any evidence of human fecal matter in the growing area is an automatic failure. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.03.08	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 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 building perimeter.
3.03.09	Are pest control devices located away from exposed raw materials (e.g., seeds, transplants, soil, media), finished goods and packaging, and poisonous bait traps 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 traps should not be located within the facility.
3.03.10	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, as well as kept on file (unless barcode scanned).
3.03.11	Are interior and exterior building perimeter pest control devices adequate in number and location?	5	The distance between traps should be determined based on the activity and the needs of the operation. As a reference, the following guidelines can be used to locate traps. 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 traps 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).
3.03.12	Are all pest control devices identified by a number or other code (e.g. barcode) ?	5	All traps should be clearly identified (e.g. numbered) to facilitate monitoring and maintenance. All traps should be located with signs (that state the trap number and also that they are trap identifier signs).
3.03.13	Are all pest control devices effective and bait traps secured?	5	All traps should be correctly orientated with openings parallel with and closest to walls. Bait traps should be locked and tamper resistant in some way (e.g., locks, screws, etc.). Bait traps should be secured to prevent removal and only block bait (no pellets) should be used. If mounted on slabs or have integrated weight, then wall signs should be used to aid location.

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, quantity available, 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). The frequency of the inventory checks may decrease in short season or off-season operations; auditor discretion applies.
3.04.02	Are copies of all Safety Data Sheets (detergents, sanitizers, pesticides, etc.) on file and fully accessible at all times with clear indexes?	5	Copies of Safety Data Sheets (SDS) should be available for all chemicals (e.g., pest control, cleaning, maintenance and sanitizing chemicals, etc.), used to keep workers informed about the chemicals used in the facility, and also be available in emergency situations.
3.04.03	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. Access to chemicals needs to be controlled, so that only workers who understand the risks involved, and have been trained properly, are allowed to access these chemicals.
3.04.04	Are "food grade" and "non-food grade" chemicals used appropriately, according to the label and stored in a controlled manner?	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 entrusted with the correct use of chemicals.
3.04.05	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. If the ORP meter controls the pumps that are injecting the anti-microbial and/or buffer, there should be an independent calibrated ORP probe or other method (e.g., test strip papers, titration) in order to verify injector readings.

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 agricultural 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	Are there records showing filters in air conditioning, 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	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.
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 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 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 breakage should indicate what equipment to use and include boot and tool checks/ decontamination procedures to ensure broken glass is not unintentionally transported out of the area.
3.05.08	Has the operation eliminated or adequately controlled any potential metal, glass or hard plastic contamination issues?	10	All foreign material risks must be either removed and/or accounted for and controlled. Examples include glass, lights, hard plastic from any source, staples, metal filings, etc.

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	Is the storage area fully enclosed?	15	All raw material and finished goods should be stored inside. Food contact packaging should be stored inside. Non-food contact packaging should be stored inside, but if stored outside, should be should protected.
3.05.11	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.**
3.05.12	Are materials (commodities, processing aids, work in progress, etc.) properly marked with rotation 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.
3.05.13	Are materials (commodities, processing aids, work in progress, 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.
3.05.14	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.
3.05.15	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	Does the facility layout ensure 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.

3.05.17	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.
3.05.18	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).
3.05.19	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).
3.05.20	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.
3.05.21	Do floor drains flow in a manner that prevents contamination (e.g., from high to low risk areas, from high risk directly to drain system), are they covered, appear clean, free from odors and are well maintained?	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.
3.05.22	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, detail 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 growing area, storage area, worker amenities, external areas, worker practices, etc. No down score if another audit checklist is used, as long as all areas are covered.
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 and then at some topics covered at least quarterly, but ideally monthly. These trainings should cover food safety and hygiene, the importance of detecting food safety and/or hygiene issues with co-workers and visitors, and all food safety or hygiene issues in which they are responsible. 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) and material(s) used/given.
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 systematically 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 and are they adequately stocked (e.g., toilet paper, disposable towels, soap, etc.)? **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**	15	Toilet facilities are available to all workers and visitors. At least 1 stall per 20 workers or if more stringent, as per prevailing national/local guidelines, and should be within 1/4 mile or 5 minutes walking distance of where workers are located. Restrooms should be stocked with toilet paper, unscented/non-perfumed soap and towels. **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.08.01a	Are toilet facilities and hand washing stations clean?	15	Toilet facilities should be cleaned and sanitized at least daily. Servicing records (either contracted or in-house) should be available for review showing toilet cleaning, servicing and stocking is occurring regularly. Toilet paper should be available at each toilet location and maintained in a hygienic manner (held on rolls, not be placed in urinals or on the floor). 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 (visual signs are allowed). The visuals or 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, have water of suitable temperature and pressure, adequately stocked (e.g., disposable towels, soap, etc.) and restricted to hand washing purposes only?	15	Hand washing stations should be used only for hand washing, have water of suitable temperature and pressure and be maintained in good working order with proper drainage. They should be properly stocked with liquid non-perfumed, neutral or antiseptic soap. Single use paper towels should be used and units properly located; hot air driers are acceptable if properly located. There should be an adequate stock of soap and paper towels.
3.08.04	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.).
3.08.05	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.
3.08.06	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.
3.08.07	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.
3.08.08	Is there no sign of any worker with boils, sores, open wounds or exhibiting signs of foodborne illness working directly or indirectly with food?	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.
3.08.09	Is jewelry confined to a plain wedding band and watches 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.

3.08.10	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.
3.08.10a	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.
3.08.10b	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.).
3.08.11	Worker personal items are not being stored in the growing area(s) or material storage area(s)?	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 security risks.
3.08.12	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. Potable water should be provided for drinking, following local and national laws.
3.08.13	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.
3.08.13a	Are single use cups provided (unless a drinking fountain is used) and made available near the drinking water?	5	Water should be provided so that cross contamination issues are avoided from person to person. Examples include single-use paper cups, drinking fountains, etc.
3.08.14	Are all items removed from garment (shirt, blouse, etc.) top pockets, and unsecured items are not worn (e.g., pens, glasses on top of head, Bluetooth devices, etc.)?	3	There should be no items stored in workers' top pockets. Items in pockets and otherwise unsecured have the potential to fall into the product.
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.

AGRONOMIC INPUTS

Question No.	Question	Total Points	Expectation
3.09.01	Is sewage sludge (biosolids) being used as an input for this operation? Informational Gathering Question.	0	The use of sewage sludge (biosolids), which are by-products of waste water treatment is an automatic failure for indoor growing operations, and also where specifically prohibited under best management practices (e.g., LGMA, T-GAPs). Informational 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.
3.09.01c	Are applications incorporated into the soil prior to planting or bud burst for tree crops and not applied during the growing season?	10	If used, the applications should be incorporated into the soil prior to planting or bud burst for tree crops.
3.09.01d	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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).
3.09.01e	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	There should be evidence that each laboratory test result (certificate of analysis) provided is traceable to each material used. (e.g., CoA is traced to each lot of crop treatment used). Tests should include microbiological analyses. As minimum, for non-synthetic crop treatments (e.g., compost teas, fish emulsions, fish meal, blood meal, "bio fertilizers") and for animal based compost microbial testing should include *Salmonella* spp., *E. coli* O157:H7, and *Listeria monocytogenes* at Negative or <DL and include fecal coliforms/gram at < 1000 MPN of total solids and any other pathogens appropriate for the source of material using approved sampling and testing methods (e.g., AOAC and an accredited laboratory).
3.09.01f	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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).
3.09.02	Is animal based compost being used as an input for this operation? Informational Gathering Question.	0	This question is specifically targeting compost produced from raw animal manures, as opposed to green waste. Informational 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 applications incorporated into the soil prior to planting or bud burst for tree crops and not applied during the growing season?	10	If used, the applications should be incorporated into the soil prior to planting or bud burst for tree crops.

3.09.02d	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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).
3.09.02e	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	There should be evidence that each laboratory test result (certificate of analysis) provided is traceable to each material used. (e.g., CoA is traced to each lot of crop treatment used). Tests should include microbiological analyses. As minimum, for non-synthetic crop treatments (e.g., compost teas, fish emulsions, fish meal, blood meal, "bio fertilizers") and for animal based compost microbial testing should include *Salmonella* spp., *E. coli* O157:H7, and *Listeria monocytogenes* at Negative or <DL and include fecal coliforms/gram at < 1000 MPN of total solids and any other pathogens appropriate for the source of material using approved sampling and testing methods (e.g., AOAC and an accredited laboratory).
3.09.02f	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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).
3.09.03	Is the operation using untreated animal manure as an input? (e.g., raw manure &/or uncomposted, incompletely composted animal manure &/or green waste or non-thermally treated animal manure, etc.) Informational Gathering Question.	0	The use of raw manure and/or uncomposted, incompletely composted animal manure and/or green waste or non-thermally treated animal manure is an automatic failure in the Indoor Agriculture audit. Informational 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 applications incorporated into the soil prior to planting or bud burst for tree crops and not applied during the growing season?	10	If used, the applications should be incorporated into the soil prior to planting or bud burst for tree crops.
3.09.03d	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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).

3.09.03e	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	There should be evidence that each laboratory test result (certificate of analysis) provided is traceable to each material used. (e.g., CoA is traced to each lot of crop treatment used). Tests should include microbiological analyses. As minimum, for non-synthetic crop treatments (e.g., compost teas, fish emulsions, fish meal, blood meal, "bio fertilizers") and for animal based compost microbial testing should include *Salmonella* spp., *E. coli* O157:H7, and *Listeria monocytogenes* at Negative or <DL and include fecal coliforms/gram at < 1000 MPN of total solids and any other pathogens appropriate for the source of material using approved sampling and testing methods (e.g., AOAC and an accredited laboratory).
3.09.03f	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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).
3.09.04	Is the operation using non-synthetic crop treatments as an input? (e.g., compost teas, fish emulsions, fish meal, blood meal, bio-fertilizers, etc.) Informational 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. Informational 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	Is the material applied in a manner that does not contact the edible portions of the crop?	15	Non-synthetic treatments that contain animal products or animal manures should not be applied to the edible portions of crops.
3.09.04d	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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).
3.09.04e	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	There should be evidence that each laboratory test result (certificate of analysis) provided is traceable to each material used. (e.g., CoA is traced to each lot of crop treatment used). Tests should include microbiological analyses. As minimum, for non-synthetic crop treatments (e.g., compost teas, fish emulsions, fish meal, blood meal, "bio fertilizers") and for animal based compost microbial testing should include *Salmonella* spp., *E. coli* O157:H7, and *Listeria monocytogenes* at Negative or <DL and include fecal coliforms/gram at < 1000 MPN of total solids and any other pathogens appropriate for the source of material using approved sampling and testing methods (e.g., AOAC and an accredited laboratory).
3.09.04f	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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).

3.09.05	Is the operation using soil or substrate amendments as an input? (e.g., plant by-products, humates, seaweed, inoculants, and conditioner, etc.) Informational 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, humates, seaweed, and conditioners. Informational 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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).
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	Is the operation using inorganic fertilizers as an input? (e.g., ammonium nitrate, ammonium sulfate, chemically synthesized urea, etc.) Informational Gathering Question.	0	Examples of manufactured inorganic fertilizers include ammonium nitrate, ammonium sulfate, chemically synthesized urea, etc. Informational 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., Cadmium (Cd) Arsenic (As), Chromium (Cr), Lead (Pb), Mercury (Hg), Nickel (Ni), and Vanadium (V)).

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 source 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 field, 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	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	Any water treatment performed at the source (e.g., well, canal, holding tank) 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, ORP meter or as recommended by the disinfectant supplier).
3.10.01f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	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.

3.10.02	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 source 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 field, 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	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	Any water treatment performed at the source (e.g., well, canal, holding tank) 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, ORP meter or as recommended by the disinfectant supplier).

3.10.02f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	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 used in the growing operation? (e.g., pond, reservoir, watershed)	0	Informational 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 source 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 field, 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	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	Any water treatment performed at the source (e.g., well, canal, holding tank) 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, ORP meter or as recommended by the disinfectant supplier).
3.10.03f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	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.
3.10.04	Is open flowing surface water used in the operation? (e.g., river, canal, ditch)	0	Informational 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 source 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 field, 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	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	Any water treatment performed at the source (e.g., well, canal, holding tank) 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, ORP meter or as recommended by the disinfectant supplier).
3.10.04f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	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.
3.10.05	Is reclaimed water used in the operation?	0	Informational gathering question.
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	Informational 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 source 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 field, 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	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	Any water treatment performed at the source (e.g., well, canal, holding tank) 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, ORP meter or as recommended by the disinfectant supplier).
3.10.05f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	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.
3.10.06	Is tail water (including hydroponics) used in the operation?	0	Informational gathering question.
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	Informational 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 source 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 field, 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	Are there records of any anti-microbial water treatment (e.g. chlorination, U.V., ozone, etc.), and is testing current and available?	15	Any water treatment performed at the source (e.g., well, canal, holding tank) 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, ORP meter or as recommended by the disinfectant supplier).
3.10.06f	Are records kept for periodic visual inspection and disinfection (if occurring) of the water source and available for review?	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.
3.10.07	Is there a documented assessment for each water source covering animal access, upstream contamination/ runoff, proper well condition, water treatment, backflow, maintenance, cross contamination from leaching, recirculating water systems, etc., as applicable?	15	Prior to the first seasonal planting and at least annually and when any changes are made to the system, there should be a documented risk assessment for each water source covering potential physical, chemical and biological hazards from animal access, upstream contamination/runoff, proper well condition, water treatment, water capture, backflow, maintenance, cross contamination from leaching, cross connections, recirculating water systems, etc. If flood or furrow irrigation is used, there needs to be examples of how the operation is minimizing the risk.
3.10.08	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.
3.10.09	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 growing cycle? **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 name, pre-harvest interval, restricted entry interval, type of equipment used and target pests. **A ZERO POINT (NON-COMPLIANCE) DOWN SCORE IN THIS QUESTION RESULTS IN AUTOMATIC FAILURE OF THIS AUDIT.**
3.11.02	Do records show that pesticides and their use are in compliance with all requirements of label direction, national (e.g., EPA) registration and any federal, state or local regulations and guidelines? **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**	15	All pesticides must be registered for such use, as required by prevailing regulation, and used in accordance with label directions. N/A is allowed only when registration/ authorization information does not exist for pesticides to be used on target crops in the country of production. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.11.03	Where products are destined for export, do records show that only pesticides approved for use in destination market(s) are used and are in compliance with all requirements of label direction, national (e.g., EPA) registration and any federal, state or local regulations and guidelines? **Corrective actions are required if a non-compliance. If corrective actions are not provided and acceptable by the certification body a failure of the audit is scored.**	15	All pesticides must be registered for such use in the destination market, as required by prevailing regulation, and used in accordance with label directions. (i.e. application rates, intended purpose, worker protection standards, personal protection equipment, container storage, disposal). The grower should provide documented evidence that they are complying with the expectations regarding crop protection products of the country of origin and proof of those expectations. That evidence may be in the form of: chemical records, application methods, rates and dosage, compliance with pre-harvest intervals, or any other relevant information. This question is Not Applicable if the product is sold only in the country of production (domestic market). **Corrective actions are required if a non-compliance. If corrective actions are not provided and acceptable by the certification body a failure of the audit is scored.**
3.11.04	Where products are destined for export, are there records showing that pre-harvest intervals and application rates are sufficient to meet MRL entry requirements of the country of export? Records show any non-compliant product is diverted to a market where it meets requirements. **Corrective actions are required if a non-compliance. If corrective actions are not provided and acceptable by the certification body a failure of the audit is scored.**	15	Maximum Residue Limits (MRL) tests should be performed. The auditor should review those to ensure it meets MRL entry requirements in the country of destination or the Codex Alimentarius Commission if the country of destination/market follows this MRL compliance. Records show that any non-compliant product is diverted to a market where it meets the requirements. This question is Not Applicable if the product is sold only in the country of production (domestic market). **Corrective actions are required if a non-compliance. If corrective actions are not provided and acceptable by the certification body a failure of the audit is scored.** **Reference:** http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/

3.11.05	For those pesticides that are not registered for use on the target crops in the country of production or if the country does not have, or has a partial legislative framework to cover pesticides, can the grower show that they have registration information, label information, MRL tolerances, etc. for the country of destination? **Corrective actions are required if a non-compliance. If corrective actions are not provided and acceptable by the certification body a failure of the audit is scored.**	15	Grower should be aware of the crop protection products registered and/or authorized by a government agency for use in the target crops in the country of production. Where the country of production does not have or has partial legislation covering pesticides, and if the use of pesticides that are registered for the target crop in another country (extrapolation) is not prohibited, the grower must have information for the pesticides in the country(ies) of destination. The information must show: registration for the specific crop, product labels, Maximum Residue Limit (MRL) tolerances and may also include banned chemical lists, and any other relevant guidelines or legislation. If there is no information available for pesticides used that are not registered in the country of production, or its use based on registration, label and other legislation of the destination country, extrapolation is prohibited by the country of production, and an automatic failure will be scored. This question is Not Applicable if the product is sold only in the country of production (domestic market). **Corrective actions are required if a non-compliance. If corrective actions are not provided and acceptable by the certification body a failure of the audit is scored.**
3.11.06	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. If this is not followed, an automatic failure will be scored. **ANY DOWN SCORE IN THIS QUESTION RESULTS IN AN AUTOMATIC FAILURE OF THE AUDIT.**
3.11.07	Is there a documented procedure for the mixing/loading of pesticides?	5	There should be a documented procedure describing how to mix and load pesticides. 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.
3.11.08	Is there a documented procedure for the application of pesticides?	5	There should be a documented procedure for the application of pesticides. The procedure should adhere to the product label and should include the use of Personal Protective Equipment, re-entry Intervals, posting of treated area, etc.
3.11.09	Is there a documented procedure for the rinsing and cleaning of pesticide equipment?	5	There should be a documented procedure describing how to rinse and clean pesticide equipment. Pesticide equipment includes measuring containers, mixing containers, application equipment and rinseable pesticide containers. The procedure should adhere to the product label, to country, federal, state or local laws and regulations, and should include: rinsing empty equipment immediately to prevent residues from drying and becoming difficult to remove, and adding a rinsate (water from rinsing containers or equipment) to spray tanks as part of the pesticide mixing process.
3.11.10	Is there documentation that shows the individual(s) making decisions for pesticide applications are 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.).
3.11.11	Is there documentation that shows that individuals who handle pesticide materials are trained and are under the supervision of a trained person?	15	Current valid certificates, licenses, or another form of proof of training recognized by prevailing national/local standards and guidelines should be available for supervisors/ workers handling, mixing/loading/and applying pesticide materials.

3.11.12	Are pesticides stored without risk of contamination, in a locked, dedicated area with legible labels, and are empty pesticide containers held and disposed of according to their label and/or regulatory instructions?	10	Pesticide containers should be stored securely: away from other materials, locked, signs posted, away from water source, off floor, well-ventilated, and inventory kept. Empty pesticide containers should be kept in a secured storage area until they can be recycled or disposed of properly. If containers cannot be refilled, reconditioned, recycled or returned to the manufacturer, they should be crushed, broken or punctured to make them unusable. Containers should be disposed of in accordance with label directions and with federal and state or local laws and regulations. Pesticide containers designed to be returned and refilled should not be reused or tampered with.
3.11.13	Is it evident that the equipment used for pesticide applications is in good working order?	10	All equipment used in pesticide applications should be in good working order so that correct applications can be made, thus reducing potential crop contamination or drift issues.
3.11.14	Are restricted entry interval (REI) signs posted in the area(s) where pesticide applications occur?	10	All agricultural pesticide labeling provides a specific REI. Some regulations provide REIs for certain pesticide/crop combinations. Whenever there is a labeling REI and a regulatory REI for an application, the longer REI must be followed. Warning signs should be posted before an application when required by the pesticide label, regulations or restricted material permit. All indoor applications require warning signs.

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.