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SQF Module 7 – GAPS

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Introduction

This comparative analysis between SQF Module 7 and "Guidance for Industry – Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables" (GAPs Guide) is a continuation of the project that compares SQF Level 2 Module 7 with the Food Safety Modernization Act's Produce Safety Rule.

The existing GAPs Guide has served as significant guidance to the produce industry since 1997. In May of 1997, as part of the President's Food Safety Initiative, the Department of Health and Human Services, the U.S. Department of Agriculture (USDA), and the Environmental Protection Agency (EPA) sent a report to the President that identified produce as an area of concern. Later that year, President Clinton announced a plan entitled "Initiative to Ensure the Safety of Imported and Domestic Fruits and Vegetables" (the "Produce Safety Initiative") to provide further assurance that fruits and vegetables consumed by Americans, whether grown domestically or imported from other countries, meet the highest health and safety standards. As part of this initiative, the President directed the Secretary of Health and Human Services, in partnership with the Secretary of Agriculture and in close cooperation with the agricultural community, to issue guidance on good agricultural practices (GAPs) and good manufacturing practices (GMPs) for fruits and vegetables. In response to this directive, the FDA and USDA issued the "Guidance for Industry – Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables." This guidance document ("the GAPs guide") addresses microbial food safety hazards and good agricultural and management practices common to the growing, harvesting, washing, sorting, packing, and transporting of most fruits and vegetables sold to consumers in an unprocessed or minimally processed (raw) form (similar to the proposed Produce Rule). However, GAPs is a voluntary, not mandatory, science-based guide that can be used by both domestic and foreign fresh fruit and vegetable producers to help ensure the safety of their produce.

SQF, being a leading GFSI scheme, desired to understand how its Module 7 measured up against both the proposed Produce Safety Rule as well as the GAPs Guide to better understand what "gaps" it may need to address in its Code in order to continue to be a leading service provider to its clients. TAG's analysis revealed that the SQF requirements measure up extremely favorably and are comparable to or exceed the requirements in the Proposed Produce Safety Rule and the GAPs Guide in the major key areas.

Summary of Analysis

As a starting premise, the SQF Code as it relates to produce and packing houses it is audit-base list of detailed requirements that auditors are looking for when considering issuing certification. Conversely, GAPs is somewhat of a different model and format which in that it is written in the form of industry guidance. Thus there is more "how" and why" in the GAPs Guide than found in the SQF Code, rather than a list of specific "what's" (aka requirements) found in the SQF Code. This distinction can pose some challenge in comparing the two. Notwithstanding if these distinctions are kept in mind during this review, the reader will soon learn that SQF is at least comparable if not exceeds the GAPs recommendations in nearly every area.

SQF Exceeds in Nearly All Areas:

As Table 1 reveals, from agricultural water quality standards to soil amendments of animal origin, and from calibration of equipment to requirement to document and retain records, SQF exceeds the GAPs Guidance with respect to several key good agricultural practices expectations. The comments section of the Table endeavors to explain the nuances, distinctions and differentiations between the SQF element and the closest relevant corresponding GAP section.

Interesting "Gaps" in GAPs:

GAPs is not as explicit in terms of written plans, setting corrective actions, and verification requirements as is SQF. Notwithstanding this apparent "gap", the language at the conclusion of the GAPs Guide does embrace the importance of these critical factors in ensuring food safety and establishes the right tone--one that is commensurate with the "guidance" style of the GAPs guide. Specifically, in the conclusion, it states:

> Once good agricultural and manufacturing practices are in place, it is important that the operator ensure that the process is working correctly. Operators should follow up with supervisors or the person in charge to be sure that regular monitoring takes place, equipment is working, and good agricultural and management practices are being followed. Without accountability to ensure the process is working, the best attempts to minimize microbial food safety hazards in fresh fruits and vegetables are subject to failure.

In essence, this is basically saying, once you assess the risks and establish good agricultural practices (which are specified quite well in the guide), then you have to monitor them on a continuous basis and correct them when they aren't working. So, although it is a much "softer" guidance versus a more prescriptive requirement, the general tone of the GAPs Guide seems to ultimately expect—or assume—similar levels of monitoring, verification, and documentation that we see in the SQF requirements.

Other 'gaps' include:

- Calibration of equipment (For example: See SQF Element 7.2.8.4 Maintenance Protocol)

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- The need for written plans: (For example: In SQF Element 7.2.7.1 Maintenance Protocol: This is a good example of an SQF Requirement that requires a written plan, whereas the equivalent GAPs requirement is simply a more general statement about the importance of maintenance without a specific written plan requirement. See also, 7.5.8.2 where the requirements are the same, except SQF "requires" a written plan and GAPs uses the term "consider.")
- Validation of soil amendment of animal origin
- Corrective Actions

Where GAPs May Have an Edge: As briefly touched on above, although SQF is comparable to or exceeds GAPs in most areas, one area where GAPs may have an edge up is explaining *why* growers/farmers need to have these requirements. While SQF gives a better treatment of the "what" that is required, SQF may be able to be even more effective at actually improving food safety if it also added more of the "why" behind its requirements, as does the otherwise more general GAPs Guide. Because of the great variability of farms (more so than manufacturing facilities), both SQF and GAPs have to worry about balancing rigid standards with flexibility. So when you have a situation where there is a lot of leeway in implementing a certain requirement, understanding the "why" behind the requirement helps to make sure that farms are less apt to miss the mark on implementing a key food safety control.

Table 1. Where SQF Module Exceeds GAPs.

Topic	SQF	FDA –GAP	Status	Comments
Property Location	7.1.1.1, 7.1.1.2, 7.1.1.3, 7.1.1.4		Exceed	GAPs is not as prescriptive as the SQF's requirement. SQF is broader in the sense that it requires a risk assessment for prior land use, adjacent land use, and other environmental factors.
Glasshouses, Hydroponics	7.2.2.1, 7.2.2.2	Not specifically addressed.	Exceed	SQF requires facilities that grow produce indoors be designed so that there is no food safety risk to the product. It also requires written procedures for handling of glass or hard plastic breakages in glasshouses
Chillers and Cold Storage	7.2.3.3, 7.2.3.4, 7.2.3.7, 7.2.3.8		Exceed	The GAPs requirements doesn't address chillers and cold storage areas and their respective requirements separately as does SQF, (e.g. it doesn't robustly address specific guidance on refrigeration/cooling like SQF's requirements.) Further, lighting fixtures and requirements pertaining to loading docks or these areas being sealed, drained or graded and are not referenced in PS Rule.
Storage of Dry Ingredient, Packaging and Utensils	7.2.4.2	Not specifically addressed.	Exceed	Storage rooms shall be designed and constructed to allow for the separate, hygienic storage of harvesting and packing utensils away from farm machinery and hazardous chemicals and toxic substances. Note: GAPs does not address chemical hazards.
Farm Machinery, Conveyors, Vehicles, Equipment and Utensils	7.2.5.4 7.2.6.6	Not specifically addressed.	Exceed	SQF requires farms to store farm machinery separate from food conveyors, harvesting and processing rigs. Tractors, harvesters, field packing equipment and machinery driven over ground crops shall be fitted with drip trays to prevent contamination of the crop by lubricants and oils.

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Calibration	7.2.8.1, 7.2.8.2, 7.2.8.3, 7.2.8.4	Not specifically addressed	Exceed	The GAPs are silent on the topic of calibration. Equipment calibration against specified standards, monitoring frequency for calibration nor document retention of calibration records is prescribed in the GAPS, thus setting SQF ahead of the GAPS.
Cleaning and Sanitation	7.2.11.1, 7.2.11.2, 7.2.11.3		Exceed	SQF has additional requirements relating to cleaning and sanitation responsibilities –it prescribes the Who, What, When and How. GAPs prescribes the Who and only an awareness of the What and the How. Documentation and record keeping is a distinct "gap" in the GAPs.
Personnel Practices	7.3.1.3, 7.3.1.4, 7.3.1.5	Not specifically addressed	Exceed	Employee hygiene, medical screenings and a written policy that specifies the procedures for handling product or product contact surfaces that have been in contact with blood or other bodily fluids are required by SQF but not the GAPS.
Sanitary Facilities and Hand Washing	7.3.2.2		Exceed	SQF is more prescriptive as to precisely when personnel must wash hands. GAPs only requires hand washing before commencing work with produce and after using the toilet.
Jewelry and Personal Effects by Employees and Visitors	7.3.4.1, 7.3.5.4	Not specifically addressed	Exceed	SQF has a jewelry and other loose object policy for employees and visitors that pose a threat to the safety of the product.
Amenities	7.3.6.1, 7.3.6.2, 7.3.6.3		Exceed	SQF requires areas for meal breaks away from a food contact/handling zones and processing equipment, storage space for personal belongings and drinking water available to all field employees is prescribed by SQF
First Aid	7.3.7.1, 7.3.7.2	Not specifically addressed.	Exceed	First aid facilities shall be available and maintained to treat minor injuries and suitable arrangements shall be provided in circumstances when a patient requires more specialized care. First aid kits shall be kept in a sanitary and usable condition.
Field Packing Personal Practices	7.4.1.1, 7.4.1.2		Exceed	Note: although GAPs does not specifically address field packing employee practices, it does require that operators ensure that produce that is washed, cooled, or packaged in the field is not contaminated in the process. (See VI.B.1.0).
Water System Description	7.5.1.2	Not specifically addressed.	Exceed	GAPs does not specifically address agriculture water standards and regulations. A more general provision relating to sanitation is contained in GAPs V.B: Operators should operate their facilities or farms in accordance with the laws and regulations that describe field and facility sanitation practices. The field sanitation laws prescribed under the Occupational Safety and Health Act 29 CFR 1928.110, subpart I, describe the appropriate number of toilets to the number of workers, proper hand washing facilities, maximum worker-to-restroom distance, and how often such facilities should be cleaned.
Water Management Plan	7.5.5.3	Not specifically addressed.	Exceed	Water used for hydroponics culture shall be frequently changed and procedures shall be implemented that minimizes microbial or chemical contamination. Delivery system shall be designed so they can be maintained and cleaned.
Corrective Actions	7.5.6.1	Not specifically addressed.	Exceed	SQF specifically requires corrective actions in several elements throughout Module 7 and treats corrective actions more robustly than GAP in general.
Ice	7.5.7.1		Exceed	GAPS only ask that one "considers" periodic testing of water used to make ice; whereas SQF requires verification that ice meets specific standards which de facto requires testing to verify. The producer shall verify that any ice used is made from water that meets the microbiological and quality standards as specified in element 7.5.5.

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Storage of Hazardous Chemicals, Toxic Substances, and Petroleum Products	7.6.1.1, 7.6.1.2, 7.6.1.4, 7.6.1.5		Exceed	SQF is more prescriptive in storage requirements of hazardous chemicals, toxic substances and petroleum products (e.g. locked and in original labeled containers, etc.). Hazardous chemicals, toxic substances, and petroleum products shall be stored so as not to present a hazard to employees, product, product handling equipment or areas in which product is handled, stored or transported.
Use of Fertilizers (Soil Amendments)			Exceed	SQF requires storage of concentrated and diluted liquid soil amendments in bundled tanks designed to retain at least 110% of total volume must be in place, inventories of all soil amendment substances and use must be kept and chemicals shall be purchased from an approved supplier and inventories maintained.
Soil Amendment	7.7.2.1, 7.7.2.2, 7.7.2.3		Exceed	No raw untreated manure shall be used. The Soil amendment treatment and application methods shall be documented and implemented and designed to prevent contamination of product. GAPs has no documentation requirement. GAPs does not recommend application of raw manure to produce fields; SQF prohibits it. While GAPs doesn't specifically require validation, it does make clear that composting is an active treatment process, with controlled steps and the need for managed conditions. It would appear that although GAPs is not specific in requiring validation of treatment parameters, in order to actually compost in the way it is laid out in GAPs, the operator would need to use an industry standard composting method—albeit not requiring per se validation. Further records are not required to be retained. Thus, validation and records are the key distinctions between SQF and GAPs. GAPs doesn't address: *national or local guidelines. *equipment. *records. *signage.
Purchasing Chemicals	7.7.3.1	No specifically addressed.	Exceed	SQF requires chemicals to be purchased from an approved supplier in accordance with applicable legislation. An inventory of all chemicals purchased and used shall be maintained.
Agricultural Chemicals	7.7.4.1, 7.7.4.2, 7.7.4.3, 7.7.4.4, 7.7.4.5	No specifically addressed.	Exceed	SQF is more prescriptive in the requirements surrounding use, documentation, registration and disposal of chemicals, such as requiring a crop protection action plan indicating the applications used for a target pest or disease and the threshold levels, and if product is intended for export, agricultural chemical use must consider requirements in the intended country of destination. GAPs only covers microbial hazards. It doesn't deal with chemical hazards.
Foreign Matter and Glass Procedures	7.8.2.1, 7.8.2.2, 7.8.2.3, 7.8.2.4	Not specifically addressed.	Exceed	GAPs does not cover physical hazards.
Dry, Liquid and Unsanitary Waste Disposal	7.9.1.2	Not specifically addressed.	Exceed	The responsibility and methods for the effective and efficient disposal of all solid waste including inedible material and disused packaging, and liquid and unsanitary waste shall be documented and implemented.
Topic	**SQF**	**FDA –GAP**	**Status**	**Comments**
Personnel Practices	7.3.1.2		Different	It appears that the GAPs requirement may exceed the SQF requirement in terms of degree. While SQF requires "personnel suffering from…an infectious disease" avoid contact with fresh produce, GAPs requires "any worker showing symptoms of an active case of illness that may be caused by any of these pathogens" to be excluded. Therefore, under the GAPs requirement, it is not necessary to show that the worker actually suffers from an infectious disease before excluding them.

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Table 2: Module 7: Food Safety Fundamentals – Good Agricultural Practices for Farming of Plant Products (GFSI BI)

SQF Element # and Module Requirement	GAPS	Does SQF Exceed, or is it Comparable or Different From the Proposed Rule?	Comments
7.1 Site Requirements			
7.1.1 Property Location			
7.1.1.1 The farm and facilities shall be such that adjacent and adjoining buildings, operations and land use do not interfere with the safe and hygienic operations on the property.	Not specifically addressed.	Exceed.	
7.1.1.2 A soil map shall be prepared and risk assessment conducted to evaluate and document the risk to crops due to prior land use, adjacent land use, and other environmental factors including structures and equipment. Consideration shall be given to the following: i. History of land use. ii. Topography. iii. Adjacent land use. iv. Other factors that may impact on the ability to supply safe product.	II.B.1.1 Be aware of current and historical use of land. GAPs suggests operators review and evaluate the operations and land use of neighboring farms and facilities to determine the risks of contamination from shared water sources and run-off. Operators should consider water-related hazards, including the presence of surrounding animal production facilities or lands, the lack of protective measures taken by surrounding animal production facilities (e.g., fences, or other barriers), the application of manure by surrounding farms, the topography of the land, local rainfall patterns, risks of contamination from shared water sources, and distance from surrounding farms or facilities	Exceed.	Although the GAPs guide discusses land in the context of water quality, it seems that SQF and GAPs are both getting at the same thing—during the planning phase, consider how off-farm risks could effect on-farm safety efforts. SQF's requirement is broader in the sense that it requires a risk assessment for prior land use, adjacent land use, and other environmental factors. GAPs is not as prescriptive.
7.1.1.3 The analysis shall be re-evaluated in the event of any circumstance or change that may impact on the production of safe product.	Not specifically addressed.	Exceed.	Although the GAPs requirements for water state that needs may change from time to time, and that water protection measures should follow those changes, there is no explicit requirement like the SQF requirement.
7.1.1.4 Where risks are identified, control measures shall be implemented to reduce the identified hazards to an acceptable level.	Not specifically required. However II.B.2.1 is the closest relevant provision: Change water as necessary to maintain sanitary conditions. Consider developing SOPs (standard operating procedures or sanitary operating plans), including water change schedules, for all processes that use water.	Exceed.	The closest relatable requirement in GAPs would be the water-related historical land analysis requirement.

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7.2 Product Handling and Storage Areas and Equipment			
7.2.1 Field and Storage Buildings			
7.2.1.1 All buildings used to store equipment, field chemicals, field packing materials, or field product shall be designed and constructed so as to permit compliance to good hygiene practices and avoid product contamination.	VII.B.2.0 Packing and storage facilities should always be maintained in a clean condition. Equipment that contacts fresh produce should be designed and constructed to be adequately cleanable. The design, construction, use, and general cleanliness of equipment can help reduce the risk of cross contamination of produce.	Comparable.	GAPs focuses on maintenance, while SQF focuses on design and construction. SQF does not address ongoing building maintenance.
7.2.1.2 Buildings designated to store field product or field product packing materials shall be of durable construction. Internal surfaces shall be smooth and impervious with a light colored finish and shall be kept clean.	VII.B.2.0 Packing and storage facilities should always be maintained in a clean condition.	Comparable.	SQF is more specific regarding internal building surface requirements.
7.2.1.3 Field product contact surfaces shall be constructed of materials that do not constitute a food safety risk.	VII.B.2.0 Packing and storage facilities should always be maintained in a clean condition. Equipment that contacts fresh produce should be designed and constructed to be adequately cleanable. The design, construction, use, and general cleanliness of equipment can help reduce the risk of cross contamination of produce.	Comparable.	
7.2.2 Glasshouses, Hydroponics			
7.2.2.1 Facilities that grow produce indoors shall be designed so that there is no food safety risk to the product.	Not specifically addressed.	Exceed.	
7.2.2.2 A procedure for handling of glass or hard plastic breakages in glasshouses shall be documented and implemented (refer also 7.8.2).	Not specifically addressed.	Exceed.	
7.2.3 Chillers and Cold Storage			
7.2.3.1 The producer shall provide confirmation of construction approvals and the effective operational performance of any chilling and chill storage facility.	II.B.2.4 Cooling operations. Identify the proper temperature requirements for individual types of produce and maintain temperatures that promote optimum produce quality. Maintaining optimum produce quality may reduce the risk of microbial hazards. Equipment should be clean and sanitary. Chilling equipment, such as hydro coolers, and containers holding produce during chilling operations should be clean and	Comparable.	SQF focuses on both the construction and the operation of an effective cooling system, however GAPs requires a daily check to make sure the cooling systems are functioning properly, and thus these requirements appear comparable. GAPs requires operators to tailor the

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	sanitary. Field soil should be removed as much as possible from produce and containers prior to chilling. Interiors of hydro coolers should routinely be cleaned and sanitized. VII.B.2.0 Maintain the cooling system to ensure proper functioning of the equipment. Inspect all cooling equipment daily, remove all debris, and clean as necessary when in use.		cooling systems to fit the types of produce to be held. This requirement is not present in SQF. In addition, GAPs requires chilling equipment to be cleaned and sanitized as needed. This cleaning and maintenance requirement is not present in SQF.
7.2.3.2 Floors shall be constructed of smooth, dense impact resistant material that is impervious to liquid and easily cleaned. Floors shall be effectively graded, to allow the effective removal of all overflow or waste water under normal conditions.	VII.B.2.0 Maintain the cooling system to ensure proper functioning of the equipment. Inspect all cooling equipment daily, remove all debris, and clean as necessary when in use.	Comparable.	While SQF is more specific regarding floor material and grading requirements, the spirit of the SQF and GAPs requirements appear comparable. Note: the SQF requirement differs in that it focuses on having storage areas that are "easily cleanable," whereas the GAPs requirement focuses on maintaining a clean cooling system. It might be that GAPs is more focused on the equipment, whereas SQF is focused more on the facility. Since effective chilling requires a focus on both the facility and the actual chilling equipment, it seems that both regimes could be enhanced
7.2.3.3 Wall, ceilings, doors, frames and hatches shall be of a solid construction. Internal surfaces shall be smooth and impervious with a light colored finish.	Not specifically addressed.	Exceed.	
7.2.3.4 Lighting shall be shatter-proof or provided with protective covers.	Not specifically addressed.	Exceed.	
7.2.3.5 Sufficient refrigeration and controlled atmosphere capacity shall be available to chill or store the maximum anticipated throughput of product with allowance for periodic cleaning of storage rooms.	II.B.2.4 Cooling operations. Identify the proper temperature requirements for individual types of produce and maintain temperatures that promote optimum produce quality. Maintaining optimum produce quality may reduce the risk of microbial hazards. VII.B.2.0 Maintain the cooling system to ensure proper	Comparable.	While the GAPs requirement is written much broader, it appears to cover the same general SQF requirements in this subsection. Note: because GAPs makes it a point to provide the reasoning behind the

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	functioning of the equipment. Inspect all cooling equipment daily, remove all debris, and clean as necessary when in use.		requirement, it is more likely that the operator will understand and properly implement the requirement. While SQF does require "sufficient refrigeration," this is a very general requirement and may result in confusion regarding what constitutes "sufficient refrigeration."
7.2.3.6 Discharge from defrost and condensate lines shall be controlled and discharged to the drainage system.	VII.B.2.0 Maintain the cooling system to ensure proper functioning of the equipment. Inspect all cooling equipment daily, remove all debris, and clean as necessary when in use.	Comparable.	Again, the GAPs requirement is a general cooling system functionality requirement but appears comparable.
7.2.3.7 Chilling and cold storage facilities shall be fitted with temperature monitoring equipment or suitable temperature monitoring device that is located so as to monitor the warmest part of the room and is fitted with a temperature gauge that is easily readable and accessible.	VII.B.2.0 Maintain the cooling system to ensure proper functioning of the equipment. Inspect all cooling equipment daily, remove all debris, and clean as necessary when in use.	Exceed.	Again, the GAPs requirement is a general cooling system functionality requirement thus its basic tenets apply. However SQF is more prescriptive as applied to temperature monitoring in the warmest part of the room and specific temperature gauge requirements, thus exceeding the GAPs requirements.
7.2.3.8 Chill and cold storage loading dock areas shall be appropriately sealed, drained and graded.	Not specifically addressed. Potential application: II.B.2.4 Air cooling equipment and cooling areas should be periodically cleaned and inspected. Potential sources of contamination should not be located near air intakes.	Exceed.	SQF extends the idea of "cooling system" to include surrounding amenities. If this rationale is applied to chill and cold storage loading dock areas and cooling areas, then GAPs requirement II.B.2.4 may apply.
7.2.4 Storage of Dry Ingredient, Packaging and Utensils			
7.2.4.1 Silos used to store seed or food crops shall be constructed of approved materials and designed to remain dry, clean and free from any dirt residues, so they remain fit for the purpose, in an acceptable condition, enable safe fumigation practices and prevent the invasion of pests.	VII.B.2.0 Packing and storage facilities should always be maintained in a clean condition. Remove, as much as practicable, all visible debris, soil, dirt, and unnecessary items from product storage areas on an ongoing basis. Clean these areas on a regularly scheduled and "as needed" basis. VII.B.3.0 Establish a pest control system. For all facilities, establish a pest control program to reduce the risk of contamination by	Comparable.	While the GAPs sections do not dictate packing or storage facility construction materials, the respective requirements are otherwise comparable.

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	rodents and other animals.		
7.2.4.2 Storage rooms shall be designed and constructed to allow for the separate, hygienic storage of harvesting and packing utensils away from farm machinery and hazardous chemicals and toxic substances.	Not specifically addressed.	Exceed.	Note: GAPs does not address chemical hazards.
7.2.5 Farm Machinery, Conveyors, Harvesting and Processing Rigs Construction and Storage			
7.2.5.1 Product contact surfaces on conveyors, harvesting and processing rigs shall be designed and constructed to allow for the efficient handling of product and those surfaces in direct contact with product shall be constructed of materials that will not contribute a food or feed safety risk.	VII.B.2.0 Equipment used in sorting, grading, and packing fresh produce should be of such material and workmanship as to be adequately cleanable. The design, construction, use, and general cleanliness of equipment can help reduce the risk of cross contamination of produce.	Comparable.	
7.2.5.2 Food processing equipment including knives, totes, trays, conveyors, containers and other equipment shall be constructed of materials that are non-toxic, smooth, impervious and easily cleaned.	VII.B.2.0 Keep equipment or machinery that comes in contact with fresh produce as clean as practicable. Equipment such as knives, saws, blades, boots, gloves, smocks, and aprons should be cleaned, inspected for defects that make them uncleanable on a regular basis, and replaced as needed.	Comparable.	
7.2.5.3 Provision shall be made for the washing and storage of processing rigs, equipment, conveyors, totes, trays containers and utensils.	VI.B.2.0 Keep harvest containers clean to prevent cross-contamination of fresh produce. Assign responsibility for equipment to the person in charge. The person with assigned responsibility needs to know how equipment is being used during the day, ensure that it is functioning properly, and takes steps to ensure proper cleaning and sanitizing of equipment when needed. VII.B.2.0 Keep equipment or machinery that comes in contact with fresh produce as clean as practicable. All sorting, grading, and packing equipment that makes contact with fresh produce may serve as a vehicle for spreading microbial contamination. Remove mud and debris from processing equipment daily. Equipment such as knives, saws, blades, boots, gloves, smocks, and aprons	Comparable.	

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	should be cleaned, inspected for defects that make them uncleanable on a regular basis, and replaced as needed.		
7.2.5.4 Provision shall be made to store farm machinery separate from food conveyors, harvesting and processing rigs.	Not specifically addressed.	Exceed.	
7.2.6 Vehicles, Equipment and Utensils			
7.2.6.1 Equipment, vehicles, tools, utensils and other items or materials used in farming operations that may contact produce are identified and are in good repair, kept clean and sanitized, and stored in such a way as to avoid contamination.	VI.B.2.0 Use harvesting and packing equipment appropriately and keep it as clean as practicable. Harvesting and packing equipment, including harvesting machinery, knives, containers, tables, baskets, packaging materials, brushes, and buckets, must be used cleaned and sanitized before contacting fresh produce. This section specifically notes that this cleaning and sanitization must take place after field equipment is used to haul garbage, manure, or other debris. Assign responsibility for equipment to the person in charge. The person with assigned responsibility needs to know how equipment is being used during the day, ensure that it is functioning properly, and takes steps to ensure proper cleaning and sanitizing of equipment when needed. VII.B.1.0 Clean pallets, containers or bins before using to transport fresh produce. Operators should set aside an area in the receiving yard to clean pallets and containers. GAPS also requires containers that contact RTE fresh produce to be cleaned and sanitized. Care must be taken when packing produce in the field not to contaminate containers or bins by exposure to soil and manure. VII.B.2.0 Keep equipment or machinery that comes in contact with fresh produce as clean as practicable (see 7.2.5.3 above).	Comparable.	While the equipment sanitation requirements are comparable, GAPs requires a *human* element that could significantly improve field sanitation; GAPs requires that the operation assign the overall responsibility of field sanitation to a specific person, who is required to make sure that equipment is used properly and ensure properly cleaning and sanitization when necessary. GAPs acknowledges the risks of cross-contamination to produce from farming equipment. VII.B.1.0: The subsection addresses the risk of cross-contamination from pallets, containers, and bins that are used to move fresh produce around the farm.

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7.2.6.2 Water tanks shall be cleaned at a sufficient frequency so as not be a source of contamination.	II.B.2.0 Change water as necessary to maintain sanitary conditions. Consider developing SOPS for all processes that use water. Clean and sanitize water contact surfaces, such as dump tanks, flumes, wash tanks, and hydro coolers, as often as necessary to ensure the safety of produce.	Comparable.	
7.2.6.3 A documented procedure regarding the inspection of food contact harvest containers and pallets shall be implemented. The procedure shall include the type and construction of harvest containers and packing materials. 7.2.6.4 The use of harvest containers for non-harvest purposes will be clearly identified and not returned to use for harvest.	VI.B.1.0 Discard damaged containers that are no longer cleanable in an effort to reduce possible microbial contamination of fresh produce. Clean containers or bins before using to transport fresh produce. Containers used to transport RTE produce should be routinely cleaned and sanitized. VI.B.2.0 Keep harvest containers clean to prevent cross-contamination of fresh produce. Assign responsibility for equipment to the person in charge. The person with assigned responsibility needs to know how equipment is being used during the day, ensure that it is functioning properly, and takes steps to ensure proper cleaning and sanitizing of equipment when needed.	Comparable.	GAPs is more general than SQF, in that it does not specifically address the type and construction of the harvest containers, but it assumes that all containers are “cleanable.”
7.2.6.5 Vehicles used for the transport of foodstuffs shall be fit for purpose and shall not be used to carry waste materials, manure, chemicals or other hazardous substances that could cause feed contamination without thorough cleaning and inspection.	VI.B.2.0 Use harvesting and packing equipment appropriately and keep it as clean as practicable. Any equipment used to haul garbage, manure, or other debris should not be used to haul fresh produce or contact the containers or pallets that are used to haul fresh produce without first being carefully cleaned and sanitized. VIII.B.2.0 Keep transportation vehicles clean to help reduce the risk of microbial contamination of fresh produce. Operators should be aware of prior loads carried in a transport vehicle and take this information into consideration when determining use of a vehicle. Trucks that were recently used to transport animals or animal products, for example, would increase the risk of contaminating fresh produce if the trucks were not cleaned before loading produce. Consult local or state	Comparable.	

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	agencies or universities to determine the most appropriate cleaning and sanitization methods for individual operations.		
7.2.6.6 Tractors, harvesters, field packing equipment and machinery driven over ground crops shall be fitted with drip trays to prevent contamination of the crop by lubricants and oils.	Not specifically addressed.	Exceed.	
7.2.7 Maintenance Protocol			
7.2.7.1 The methods and responsibility for maintenance of equipment and buildings shall be planned, scheduled and carried out in a manner that prevents any risk of contamination of product or equipment.	VII.B.2.0 General Considerations for Facility Maintenance. Packing and storage facilities should always be maintained in a clean condition. Equipment used in sorting, grading, and packing fresh produce should be of such material and workmanship as to be adequately cleanable. The design, construction, use, and general cleanliness of equipment can help reduce the risk of cross contamination of produce. X. It is important that the operator ensure that the process is working correctly. Operators should follow up with supervisors or the person in charge to be sure that regular monitoring takes place, equipment is working, and good agricultural practices are being followed.	Comparable.	
7.2.8 Calibration of Equipment			
7.2.8.1 The methods and responsibility for the calibration and re-calibration of chemical application, measuring, test and inspection equipment used for monitoring pre-requisite program and other process controls shall be documented and implemented.	II.B.2.1 Routinely inspect and maintain equipment designed to assist in maintaining water quality, such as chlorine injectors, filtration systems, and backflow devices to ensure efficient operation. Otherwise, not specifically addressed.	Exceed.	The GAPs are silent on the topic of calibration.
7.2.8.2 Equipment shall be calibrated against national or international reference standards and methods. In cases where such standards are not available the producer shall indicate and provide evidence to support the calibration reference method applied.	Not specifically addressed.	Exceed.	The GAPs are silent on the topic of calibration.
7.2.8.3 Calibration shall be undertaken to an established schedule, to recognized standards or to accuracy appropriate to use.	Not specifically addressed.	Exceed.	The GAPs are silent on the topic of calibration.

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7.2.8.4 Calibration records shall be maintained.	Not specifically addressed.	Exceed.	The GAPs are silent on the topic of calibration.
7.2.9 Pest and Vermin Management			
7.2.9.1 The methods for controlling pest and vermin infestation on the site or facilities shall be documented and implemented. The property, storage facilities, machinery and equipment shall be kept free of waste or accumulated debris so as not to attract pests and vermin.	VII.B.3.0 Establish a pest control system. For all facilities, establish a pest control program to reduce the risk of contamination by rodents and other animals. The program should include regular and frequent monitoring of affected and treated areas to accurately assess the program's effectiveness Maintain the grounds in good condition. Grounds in the immediate vicinity of all packing areas should be kept clear of waste, litter, and improperly stored garbage. Keep all grasses cut to discourage the breeding, harboring, and feeding of pests, such as rodents and reptiles.	Comparable.	
7.2.9.2 The pest and vermin management program shall: i. Describe the methods and responsibility for the development, implementation and maintenance of the pest and vermin management program; ii. Identify the target pests for each pesticide application; iii. Outline the methods used to prevent pest problems; iv. Outline the methods used to eliminate pests when found; v. Outline the frequency with which pest status is to be checked; vi. Include on a site map the identification, location, number and type of bait stations set; vii. List the chemicals used (they are required to be approved by the relevant authority and their Material Safety Data Sheets (MSDS) made available); viii. Outline the methods used to make	VII.B.3.0 Establish a pest control system. For all facilities, establish a pest control program to reduce the risk of contamination by rodents and other animals. The program should include regular and frequent monitoring of affected and treated areas to accurately assess the program's effectiveness. Maintain the grounds in good condition. Grounds in the immediate vicinity of all packing areas should be kept clear of waste, litter, and improperly stored garbage. Keep all grasses cut to discourage the breeding, harboring, and feeding of pests, such as rodents and reptiles. Remove any unnecessary articles, including old and inoperative equipment that is no longer used, to eliminate areas that harbor rodents and insects. Clean daily to remove product or product remnants that attract pests in and around the packing facility and any other packing facility where product is handled or stored. Maintain adequate surface drainage to reduce breeding places for pests.	Comparable.	GAPs doesn't explicitly require this plan/system to be in writing, however it presumes records will be kept by all facilities. Furthermore, simply because this GAPs section may not be as "one for one" to the specific corresponding SQF element, the two appear comparable. Note: Because GAPs is only concerned with microbial hazards, chemical hazards (such as may be used as part of the pest control program) are not considered in this guide.

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employees aware of the bait control program and the measures to take when they come into contact with a bait station; and ix. Outline the requirements for employee awareness and training in the use of pest and vermin control chemicals and baits.	Monitor and maintain facilities regularly. Regularly inspect all facilities to check for evidence of pest populations or animal contamination. Minimize the availability of food and water to pests. Remove dead or trapped birds, insects. As much as practicable, ensure that potential nesting or hiding places for pests have been eliminated. Clean surfaces soiled by birds or other wildlife. Block access of pests into enclosed facilities. Exclude pests by blocking areas, such as holes in walls, doors, flooring, etc., and vents that allow entrance into the facility. Consider the use of screens, wind curtains, and traps. Use a pest control log. Maintain a pest control log that includes dates of inspection, inspection report, and steps taken to eliminate any problems. Establish frequent monitoring of affected and treated areas to determine the effectiveness of the treatment applied.		
7.2.9.3 Records of pest inspections and pest applications shall be maintained.	VII.B.3.0 Use a pest control log. Maintain a pest control log that includes dates of inspection, inspection report, and steps taken to eliminate any problems. Establish frequent monitoring of affected and treated areas to determine the effectiveness of the treatment applied.	Comparable.	
7.2.10 Animal Control			
7.2.10.1 The operation shall have a written risk assessment on animal activity in and around the production of food or feed crops that has been implemented and monitored.	VII.B.3.0 Monitor and maintain facilities regularly. Regularly inspect all facilities to check for evidence of pest populations or animal contamination. Minimize the availability of food and water to pests.	Comparable.	SQF requires a written risk assessment of animal activity while GAPs requires regular inspections. Notwithstanding SQF's written requirements, the two are comparable in meaning and purpose.
7.2.10.2 Measures shall be in place that excludes domestic and wild animals from growing fields, glasshouses, pack houses and all storage areas.	III.B.3.0 Domestic animals should be excluded from fresh produce fields, vineyards, and orchards during the growing season. Depending on the operation, good management practices may include keeping livestock confined (e.g., in pens or yards) or preventing their entry	Comparable.	

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	into fields by using physical barriers such as fences.		
7.2.11 Cleaning and Sanitation			
7.2.11.1 The methods and responsibility for the cleaning of product contact surfaces, field processing equipment and sanitary facilities shall be documented and implemented. Consideration shall be given to: i. What is to be cleaned; ii. How it is to be cleaned; iii. When it is to be cleaned; and iv. Who is responsible for the cleaning, and v. Who is responsible for the evaluation of the cleaning?	VI.B.2.0 Assign responsibility for equipment to the person in charge. The person with assigned responsibility needs to know how equipment is being used during the day, ensure that it is functioning properly, and take steps to ensure proper cleaning and sanitizing of equipment when needed.	Exceed.	SQF has additional requirements relating to cleaning and sanitation responsibilities –it prescribes the Who, What, When and How. GAPs prescribes the Who and only an awareness of the What and the How.
7.2.11.2 A schedule shall be prepared indicating the frequency of verifying the effectiveness of the cleaning of product contact surfaces, field processing equipment and sanitary facilities and indicating who is responsible for completing verification activities.	Not specifically addressed. VI.B.2.0 Assign responsibility for equipment to the person in charge. The person with assigned responsibility needs to know how equipment is being used during the day, ensure that it is functioning properly, and take steps to ensure proper cleaning and sanitizing of equipment when needed.	Exceed.	GAPs does not address the written schedule for frequency. The person in charge, however, does need to know how equipment is being cleaned, which presumes knowledge of the frequency.
7.2.11.3 A record of cleaning and sanitation activities shall be maintained.	Not specifically addressed.	Exceed.	Documentation and record keeping is a distinct "gap" in the GAPs.
7.3 Personal Hygiene and Welfare			
7.3.1 Personnel Practices			
7.3.1.1 Personnel engaged in the handling of product shall observe appropriate personal practices. Corrective actions shall be implemented for personnel who violate food safety practices.	IV.B.1.0 It is important to ensure that all personnel, including those indirectly involved in fresh produce operations, such as equipment operators, potential buyers and pest control operators, comply with established hygienic practices. Depending on the workers' job requirements, periodic refresher or follow-up training sessions may be needed. Any worker showing symptoms of an active case of illness that may be caused by any of these pathogens should be	Comparable	Although the GAPs guide does not explicitly state that "corrective actions shall be implemented," in practical terms, the most common corrective action taken for a personnel hygiene violation is simply a re-training, and since the GAPs requirement require operators to schedule refresher or follow-up training as needed, it can be inferred that these trainings could take place

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	excluded from work assignments that involve direct or indirect contact with fresh produce. Workers with diarrheal disease and symptoms of other infectious diseases should not work with fresh produce or the sorting and packing equipment in the packing facility. Operators should instruct employees to report any active case of illness to their supervisor before beginning work. Supervisors should be familiar with the symptoms of infectious diseases so that if symptoms are evident, the supervisor can take appropriate steps Ensure good hygienic practices are followed by visitors to the farm, packing, or transport facilities whenever they come into contact with fresh produce. Operators should require that product inspectors, buyers, and other visitors comply with established hygienic practices when inspecting produce.		as a form of corrective action. Note: the GAPs guide references outside materials, in this case, OSHA and CGMPs. SQF does not. For Personnel Requirements in the processing and packing stages, see Proposed CGMP Section 117.10.
7.3.1.2 Personnel suffering from, or are carriers of, an infectious disease which can be carried with food as a vehicle shall not engage in growing or product handling or field processing operation.	IV.B.1.0 Any worker showing symptoms of an active case of illness that may be caused by any of these pathogens should be excluded from work assignments that involve direct or indirect contact with fresh produce. Workers with diarrheal disease and symptoms of other infectious diseases should not work with fresh produce or the sorting and packing equipment in the packing facility.	Different	It appears that the GAPs requirement may exceed the SQF requirement in terms of degree. While SQF requires "personnel suffering from…an infectious disease" avoid contact with fresh produce, GAPs requires "any worker showing symptoms of an active case of illness that may be caused by any of these pathogens" to be excluded. Therefore, under the GAPs requirement, it is not necessary to show that the worker actually suffers from an infectious disease before excluding them. Furthermore, the GAPs requirement addresses worker-exclusion in the context of the packing facility while the SQF requirement does not.
7.3.1.3 A medical screening procedure shall be in place for all employees, and will also be applicable to all visitors and contractors.	Not specifically required.	Exceed.	GAPs does not directly address medical screenings.
7.3.1.4 Personnel with exposed cuts, sores or lesions shall not be engaged in handling or processing product.	IV.B.1.0 Provide protection from a lesion. A lesion that contains pus, such as a boil or infected	Comparable.	

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Minor cuts or abrasions on exposed parts of the body shall be covered with a suitable waterproof dressing.	wound that is open or draining and that is located on parts of the body that might have contact with produce or produce harvesting, sorting, or packing equipment, increases the risk of contaminating fresh produce. If a worker has a lesion that cannot be effectively covered in such a way to prevent contact with fresh produce or related equipment, the employee should not be working in any aspect with fresh produce, utensils, or other food contact surfaces of equipment.		
7.3.1.5 A written policy shall be in place that specifies the procedures for handling product or product contact surfaces that have been in contact with blood or other bodily fluids.	Not specifically addressed.	Exceed.	
7.3.1.6 Smoking, chewing, eating, drinking (except for water) or spitting is not permitted in any growing areas including on field processing rigs and during harvesting and packing operations.	Not specifically addressed.	Exceed.	
7.3.2 Sanitary Facilities and Hand Washing			
7.3.2.1 Toilet facilities shall be provided and designed, constructed and located in a manner that minimizes the potential risk for product contamination. i. Toilets shall cater for the maximum number of employees and be constructed so that they can be easily cleaned and maintained; ii. Hand wash basins with clean water, hand soap, disposable towels or effective hand drying device, waste bins and a tank that captures used hand wash water for disposal shall be provided inside or adjacent to toilet facilities; iii. Signage in appropriate languages shall be provided adjacent to hand wash basins instructing people to wash their hands after each toilet visit; iv. Racks for protective clothing used by field packing employees shall be provided; v. Toilets shall be located so as to provide easy access on farms for field workers;	V.B.1.0 Toilet facilities should be accessible. The more accessible the facilities, the greater the likelihood that they will be used. Workers should always have the opportunity to use the facilities when they need to, not only when they are on break. This helps reduce the incidence of workers in the field or outside packing areas relieving themselves elsewhere (such as in fields). Toilet facilities should be properly located. Toilet facilities in the field should not be located near a water source used in irrigation or in a location that would subject such facilities to potential runoff in the event of heavy rains. Runoff from improperly constructed and located toilet facilities has the potential to contaminate soil, water sources, produce, animals, and workers. Toilet facilities and hand washing stations should be well supplied. Provide an adequate supply of toilet paper. Hand washing stations should be equipped with a basin, water, liquid soap, sanitary hand drying devices (such as disposable paper towels), and a waste container. All facilities should be kept clean.	Comparable.	Both SQF and GAPs set out detailed requirements relating to toilet facilities. Note: GAPs references the OSHA requirements for toilet access. In many circumstances, the minimum number of toilets and their location will be dictated by law—SQF does not address this possible conflict.

SQF Element # and Module Requirement	GAPS	Does SQF Exceed, or is it Comparable or Different From the Proposed Rule?	Comments
vi. Toilet and wash stations shall be maintained in a clean and sanitary condition.	Toilets and hand washing stations, whether attached to the toilet facility or located near it, should be cleaned on a regular basis. Containers used to transport or store water for hand washing should, on a routine basis, be emptied and thoroughly cleaned, sanitized, and refilled with potable water.		
7.3.2.2 Personnel shall have clean hands and hands shall be washed by all personnel: i. Before handling product; ii. After each visit to a toilet; iii. After using a handkerchief; iv. After handling dirty or contaminated material; and v. After smoking, eating or drinking.	See V.B.1.0 Toilet facilities should be accessible. The more accessible the facilities, the greater the likelihood that they will be used. Workers should always have the opportunity to use the facilities when they need to, not only when they are on break. This helps reduce the incidence of workers in the field or outside packing areas relieving themselves elsewhere (such as in fields). . . .	Exceed.	SQF is more prescriptive as to precisely when personnel must wash hands. GAPs only requires hand washing before commencing work with produce and after using the toilet.
7.3.3 Protective Clothing			
7.3.3.1 Protective clothing shall be effectively maintained, stored, laundered and worn so as to protect product from risk of contamination.	Not specifically addressed.	Exceed.	Although GAPs is not explicit in setting standards for worker clothing, GAPs does recommend following the CGMP guidelines established in the CFR (specifically, Proposed Section 117.10). Therefore, in terms of worker dress in the packing facility, GAPs is comparable to SQF, but still lacking in terms of harvest worker standards.
7.3.3.2 Where applicable, clothing, including footwear, shall be effectively maintained, cleaned and sanitized, and worn so as to protect product from risk of contamination.	Not specifically addressed.	Exceed.	See above.
7.3.3.3 If rubber or disposable gloves are used, the operation shall have a glove use policy and personnel shall adhere to the hand washing practices outlined above.	IV.B.1.0 Single-service disposable gloves can be an important and effective hygienic practice in combination with hand washing in some circumstances. If gloves are used, be sure they are used properly and do not become another vehicle for spreading pathogens. The use of gloves in no way lessens the need or importance of hand washing and proper hygienic practices.	Comparable.	

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7.3.4 Jewelry and Personal Effects			
7.3.4.1 Jewelry and other loose objects that pose a threat to the safety of the product shall not be worn or taken onto any growing, product handling or storage operations.	Not specifically addressed	Exceed.	See Comment in 7.3.3.1.
7.3.5 Visitors			
7.3.5.1 All visitors (including management and maintenance employees) shall be required to remove jewelry and other loose objects and wear suitable protective clothing around product growing, harvesting, or storage areas.	IV.B.1.0 Ensure good hygienic practices are followed by visitors to the farm, packing, or transport facilities whenever they come into contact with fresh produce. Operators should require that product inspectors, buyers, and other visitors comply with established hygienic practices when inspecting produce.	Comparable.	While this GAP section does not specifically reference jewelry or clothing, the spirit of the section is comparable to the SQF element. Note: GAPs specifically calls attention to the visitor contamination hazards associated with operating a customer-pick operation or road-side produce stand. Nevertheless, the substantive requirements of that part are generally covered by the SQF requirements.
7.3.5.2 Visitors exhibiting visible signs of illness shall be prevented from entering any growing or product handling or field processing operation.	IV.B.1.0 Ensure good hygienic practices are followed by visitors to the farm, packing, or transport facilities whenever they come into contact with fresh produce. Operators should require that product inspectors, buyers, and other visitors comply with established hygienic practices when inspecting produce.	Comparable.	
7.3.5.3 Visitors must follow all personnel practices as designated by company for employees within various areas of fields, sheds, packing facilities or storage locations.	IV.B.1.0 Ensure good hygienic practices are followed by visitors to the farm, packing, or transport facilities whenever they come into contact with fresh produce. Operators should require that product inspectors, buyers, and other visitors comply with established hygienic practices when inspecting produce.	Comparable.	
7.3.5.4 Unsupervised children shall not be permitted to enter any harvesting, packing, or food storage areas.	Not specifically addressed.	Exceed.	

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7.3.6 Amenities			
7.3.6.1 Provision shall be made to store employee personal belongings away from crops, harvesting and field processing and packing operations, and processing equipment.	Not specifically addressed.	Exceed.	
7.3.6.2 Areas for meal breaks shall be designated and located away from a food contact/handling zones and processing equipment.	Not specifically addressed.	Exceed.	
7.3.6.3 Drinking water shall be available to all field employees.	Not specifically addressed.	Exceed.	
7.3.7 First Aid			
7.3.7.1 First aid facilities shall be available and maintained to treat minor injuries and suitable arrangements shall be provided in circumstances when a patient requires more specialized care.	Not specifically addressed.	Exceed.	
7.3.7.2 First aid kits shall be kept in a sanitary and usable condition.	Not specifically addressed.	Exceed.	
7.4 Field Packaging and Handling Practices			
7.4.1 Field Packing Personal Practices			
7.4.1.1 Appropriate personnel practices shall be employed by field packing employees which include: i. Fingernail polish shall not be permitted where product is handled with bare hands; ii. Aprons and gloves shall be kept clean; iii. Aprons and gloves shall not be left on product, work surfaces, equipment or packaging material but hung on apron and glove racks provided; iv. All product and packaging material shall be kept off the ground and the floor of	Not specifically addressed.	Exceed.	Note: although GAPs does not specifically address field packing employee practices, it does require that operators ensure that produce that is washed, cooled, or packaged in the field is not contaminated in the process. (See VI.B.1.0).

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the transport vehicle; v. Waste shall be contained in the bins identified for this purpose. Waste shall not come in contact with produce and be removed on a regular basis and not left to accumulate.			
7.4.1.2 A written policy regarding the handling and field packaging of produce, specific to the commodity, shall be implemented and maintained. The policy shall assure that: i. Damaged or decayed produce is not harvested or culled; ii. Produce that contacts the ground shall not be harvested (unless that product typically contacts the ground); iii. Measures to inspect for physical hazards and procedures to remove physical hazards are in place; iv. Cloths, towels, or other cleaning materials that pose a risk of cross-contamination shall not be used to wipe produce.	Not specifically addressed.	Exceed.	This is an interesting "gap" in the GAPs.
7.4.1.3 Packaging materials shall be appropriate for their intended used and stored in a manner that prevents contamination. A written policy shall be in place that identifies how packing materials are permitted in direct contact with soil.	VII.B.1.0 Protect unused cleaned and new packing containers from contamination when in storage. Packing containers and other packing materials that are not used right away should be stored in a way that protects them from contamination by pests (such as rodents), dirt, and water condensing from overhead equipment and structures. If packing containers are stored outside the packing facility, they should be cleaned and sanitized before use. VI.B.1.0 Ensure that produce that is washed, cooled, or packaged in the field is not contaminated in the process. Contact with manure or bio solids, poor quality water, workers with poor hygiene, and unclean packaging or packing boxes greatly increases the risk of contaminating fresh produce with pathogenic microorganisms.	Comparable.	GAPs does not require a written policy, but on balance the two requirements are comparable.

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7.4.1.4 Materials that come in contact with the produce shall be clean and in good repair.	VII.B.1.0 Repair or discard damaged containers. Inspect containers for damage on a regular basis. Because damaged container surfaces may harbor pathogenic microorganisms and cause damage to the surface of fresh produce, they should not be used. Protect unused cleaned and new packing containers from contamination when in storage. Packing containers and other packing materials that are not used right away should be stored in a way that protects them from contamination by pests (such as rodents), dirt, and water condensing from overhead equipment and structures. If packing containers are stored outside the packing facility, they should be cleaned and sanitized before use.	Comparable.	
7.5 Water Management			
7.5.1 Water System Description			
7.5.1.1 A water description plan shall be prepared that describes the water sources and the production blocks they serve, and shall include one or more of the following: maps, photographs, drawings, or other means to communicate the location of the water sources, permanent fixtures and the flow of the water system.	II.B.1.1 Identify the source and distribution of water used and be aware of its relative potential for being a source of pathogens.	Comparable.	
7.5.1.2 Agricultural water shall be sourced from a location and in a manner that is compliant with prevailing regulations.	Not specifically addressed.	Exceed.	GAPs does not specifically address agriculture water standards and regulations. A more general provision relating to sanitation is contained in GAPs V.B: Operators should operate their facilities or farms in accordance with the laws and regulations that describe field and facility sanitation practices. The field sanitation laws prescribed under the Occupational Safety and Health Act 29 CFR 1928.110, subpart I, describe the appropriate number of toilets to the number of workers, proper hand washing facilities, maximum worker-to-restroom distance, and how often such facilities should be cleaned.

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7.5.1.3 Water system intended to convey untreated human or animal waste shall be separated from conveyances utilized to deliver agricultural water.	V.B.2.0 Agricultural water can become contaminated, directly or indirectly, by improperly designed or malfunctioning septic systems. Improper disposal of human waste from toilets could lead to water, soil, animal, crop, or worker contamination. Operators should follow EPA regulations for the use or disposal of sewage sludge.	Comparable.	Assuming that operators know that using the same conveyances to transport human and animal waste is an improper septic design, it would seem that the end-results are comparable. See 40 CFR Part 503 for the EPA requirements.
7.5.2 Irrigation Water			
7.5.2.1 Agricultural water shall be drawn from a known clean source or treated to make it suitable for use. The producer shall conduct an analysis of the hazards to the irrigation water supply from source through to application, establish acceptance criteria for the monitoring of water and validate and verify the integrity of the water used to ensure it is fit for the purpose.	II.B.1.1 Identify the source and distribution of water used and be aware of its relative potential for being a source of pathogens. II.B.1.2 Microbial testing of agricultural water. There are a number of gaps in the science upon which to base a microbial testing program for agricultural water and microbial testing of agricultural water may be of limited usefulness. Growers concerned about water quality should first focus their attention on good agricultural practices (such as manure management and runoff controls) to maintain and protect the quality of their water sources. Growers interested in testing the microbial quality of agricultural water sources may want to consider the following: - Growers may elect to test their water supply for microbial contamination on a periodic basis, using standard indicators of fecal pollution, such as *E. coli* tests, which may be performed by commercial, State, or local government laboratories. However, bacterial safety of water does not necessarily indicate the absence of protozoa and viruses. - Where agricultural water comes from public sources, information on microbial analysis of the water may be available from the local water authority. - Water quality, especially surface water quality, can vary with time (e.g., seasonally or even hourly), and a single test may not indicate the potential for water to be	Comparable.	There are several agricultural water requirements and considerations under GAP II.B.1 that in essence appear comparable to the SQF requirement.

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	contaminated. Furthermore, testing water may not reveal specific pathogens if they are present in low numbers. However, appropriate microbiological testing may be useful for confirming water quality concerns in extreme situations (e.g., polluted water source) and in assessing the effectiveness of certain control programs (e.g., clean-up of well water). - Growers can consult local water quality experts, such as state or local Environmental Protection or Public Health agencies, extension agents or land grant universities, for advice appropriate for individual operations. II.B.1.1 Consider irrigation water quality and use. There is general scientific agreement that irrigation practices that expose the edible portion of plants to direct contact with contaminated water may increase microbial food safety risks especially for those crops and regions where irrigation is likely to occur close to harvest. To the extent feasible, growers should follow good agricultural practices that minimize the potential for contaminated water to contact the edible portion of the crop. Irrigation needs will vary with crop and region. Growers should first concentrate on protecting and maintaining water quality. However, where water quality is unknown or cannot be controlled, growers may want to consider irrigation practices that minimize contact between water and the edible portion of the crop. Where available and appropriate, growers may want to consider low volume sprays, drip, furrow, or underground irrigation as part of their overall program. Alternative approaches may also be used. Conversely, if knowledge or testing indicates water quality is good (such as water from properly constructed wells or municipal water supplies), the risk of water serving as a direct source of microbial contamination is low, regardless of the type of irrigation system used. Further, for some crops, such as root crops or low growing crops, it may not be possible to effectively minimize		

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	contact between irrigation water and the edible portion of the crop.		
7.5.3 Treatment of Irrigation Water			
7.5.3.1 In circumstances where irrigation water is treated to render it acceptable, the water, after treatment shall conform to the microbiological standards as outlined in element 7.5.5.	Water quality consistent with U.S. EPA requirements for drinking water, or similar standards, is recommended (Currently, the Total Coliform Rule and the Surface Water Treatment Rule)	Comparable.	
7.5.4 Water System Risk Assessment			
7.5.4.1 An initial risk assessment shall be performed and documented that takes into consideration the historical testing results of the water source, the characteristics of the crop, the stage of the crop, and the method of application.	II.B.1.1 Be aware of current and historical use of land (in terms of water). Consider irrigation water quality and use. There is general scientific agreement that irrigation practices that expose the edible portion of plants to direct contact with contaminated water may increase microbial food safety risks especially for those crops and regions where irrigation is likely to occur close to harvest. Growers may want to consider irrigation practices that minimize contact between water and the edible portion of the crop. Where available and appropriate, growers may want to consider low volume sprays, drip, furrow, or underground irrigation as part of their overall program. II.B.2.1 Consider practices that will protect water quality. As mentioned above, growers may not have control over factors that affect the watershed. However, where a potential source of microbial contamination can be identified and controlled, growers should consider practices to protect the quality of agricultural water. Irrigation needs will vary with crop and region.	Comparable.	See 7.5.5.1 for considerations of practices that will ensure and maintain water quality—risk assessment-like factors
7.5.5 Water Management Plan			
7.5.5.1 Water used for washing and treating product, cleaning food contact surfaces and mixing sanitizer solutions shall comply with potable water microbiological and chemical standards in the country of production.	II.B.2.1 Follow good manufacturing practices to minimize microbial contamination from processing water. Water quality consistent with U.S. EPA requirements for	Comparable.	Although the SQF and GAP factors read differently, they both drive towards the same outcome. That said, GAPs does not specifically

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Separate criteria will be established for irrigation water, frost control, humidifying, pesticide application, etc. as applicable, based on the hazard analysis, best practices within country of production and any applicable legislation. The water management plan shall include the following: i. Preventive controls; ii. Monitoring and verification procedures; iii. Corrective actions; iv. Documentation. Water testing shall be part of the water management plan, as directed by the water risk assessment and current industry standards or regulations for the commodity being grown.	drinking water, or similar standards, is recommended. Packers should follow good manufacturing practices to minimize the potential for the introduction or spread of pathogens via processing water. Water that meets the microbial standards for drinking water is considered "safe and sanitary." Consider practices that will ensure and maintain water quality. Such practices may include: - Perform periodic water sampling and microbial testing; - Change water as necessary to maintain sanitary conditions. Consider developing SOPs (standard operating procedures or sanitary operating plans), including water change schedules, for all processes that use water; - Clean and sanitize water contact surfaces, such as dump tanks, flumes, wash tanks, and hydro coolers, as often as necessary to ensure the safety of produce; - Install backflow devices and legal air gaps, as needed, to prevent contamination of clean water with potentially contaminated water (such as between potable water fill lines and dump tank drain lines; and - Routinely inspect and maintain equipment designed to assist in maintaining water quality, such as chlorine injectors, filtration systems, and backflow devices, to ensure efficient operation.		address corrective actions well whereas SQF does a good job of specifically requiring corrective actions in various places throughout Module 7.
7.5.5.2 Water quality shall be monitored to verify it complies with the established water microbiological and chemical standard or criteria established. A verification schedule shall be prepared indicating the location and frequency of monitoring, which shall be decided by the hazard analysis, best practices within country of	II.B.2.2 Antimicrobial chemical levels should be routinely monitored and recorded to ensure that they are maintained at appropriate concentrations. Other parameters (such as pH, temperature, and oxidation reduction potential [ORP]) that indicate levels of active agents or that affect the effectiveness of the antimicrobial used, should also be monitored and recorded. Operators	Comparable.	GAPs does not require an ISO accredited laboratory to perform the water tests.

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production, or applicable legislation. Water analysis shall be undertaken by an approved laboratory accredited to ISO 17025 or equivalent.	should establish SOPs for monitoring, recording, and maintaining antimicrobial chemical levels.		
7.5.5.3 Water used for hydroponics culture shall be frequently changed and procedures shall be implemented that minimizes microbial or chemical contamination. Delivery system shall be designed so they can be maintained and cleaned.	Not specifically addressed.	Exceed.	
7.5.6 Corrective Actions			
7.5.6.1 When monitoring shows that water does not meet established criteria or standard, producer will have a corrective action plan developed which could include additional treatment for water, additional sources for water, product identification and disposition or other alternative actions to adequately control the identified hazards.	Not specifically addressed.	Exceed.	SQF specifically requires corrective actions in several elements throughout Module 7 and treats corrective actions more robustly than GAP in general.
7.5.7 Ice			
7.5.7.1 The producer shall verify that any ice used is made from water that meets the microbiological and quality standards as specified in element 7.5.5.	II.B.2.1 U.S. operators using water for post-harvest operations in the field or packing facility are encouraged to consider those good manufacturing practices in part 110, that are applicable to their operations II.B.2.4 Keep water and ice clean and sanitary. Consider periodic microbial testing of chilling water and water used to make ice. Operators should contact ice suppliers for information about the source and quality of their ice. Water in hydro coolers should be changed as needed to maintain quality Manufacture, transport, and store ice under sanitary conditions. .	Exceed.	GAPS only ask that one "considers" periodic testing of water used to make ice; whereas SQF requires verification that ice meets specific standards which de facto requires testing to verify. GAPs references the CGMPs in regards to processing conditions. In GAPs Section II.B.2.1, it states: U.S. operators using water [and ice] for post-harvest operations in the field or packing facility are encouraged to consider those good manufacturing practices in Part 110 that are applicable to their operations. See Proposed Section 117.80(c)(16)(replacing the equivalent section in Part 110): When ice is used in contact with food, it must be made from water that is safe

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			and of adequate sanitary quality, and must be used only if it has been manufactured in accordance with current good manufacturing practice.
7.5.8 Harvest Assessment Water/Ice			
7.5.8.1 Standard Operating Procedures (SOPs) shall be developed for all uses of water during harvesting of food or feed products. The SOPs shall address: i. The microbial quality of water or ice that directly contacts the harvested crop, is used on food contact surfaces or used to deliver agricultural chemicals; ii. The treatment of re-circulated water, if used; iii. The condition and maintenance of water-delivery system; iv. The control of wash water temperature.	II.B.2.1 Change water as necessary to maintain sanitary conditions. Consider developing SOPs (standard operating procedures or sanitary operating plans), including water change schedules, for all processes that use water. Where water is reused for a series of processes, it is recommended that whenever possible, water flow counter to the movement of produce through the different unit operations. II.B.2.3 Consider the wash water temperature for certain produce. Removing field heat is a primary consideration in maintaining the quality of many types of produce. However, for some types of produce (apples, celery, tomatoes) the temperature of wash water should be greater than that of the produce or a pressure differential results that can cause water to be pulled into the plant material, causing pathogens that may be present on the produce surface or in the water to be internalized. If pathogens are pulled into the produce, washing is unlikely to reduce these pathogens (Refs. 9 and 10). Denser products (such as carrots) do not appear to be affected by water temperature differences. For products that may be susceptible to internalization of pathogens, the recommended temperature differential may be achieved either by heating water or by air cooling produce before immersion. - When it is not practical to expose produce to warmer water temperatures, good manufacturing practices to minimize pathogens in the water or on the surface of produce are especially important. Such practices may include using antimicrobial chemicals in the wash water, using spray-type wash treatments instead of submerging produce, and ensuring that both produce and water are clean before produce is submerged.	Comparable.	

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7.5.8.2 An SOP that includes water-change schedules shall be developed for all uses of water during harvesting.	II.B.2.1 Change water as necessary to maintain sanitary conditions. Consider developing SOPs (standard operating procedures or sanitary operating plans), including water change schedules, for all processes that use water.	Exceed.	This GAP section only suggests that one "consider" developing an SOP—it doesn't require a written SOP as does the SQF element.
7.6 Storage and Transport			
7.6.1 Storage of Hazardous Chemicals, Toxic Substances, and Petroleum Products			
7.6.1.1 Hazardous chemicals, toxic substances, and petroleum products shall be stored so as not to present a hazard to employees, product, product handling equipment or areas in which product is handled, stored or transported.	Not specifically addressed.	Exceed.	
7.6.1.2 Product contact chemicals such as pesticides and herbicides; rodenticides, fumigants and insecticides; sanitizers and detergents shall be stored separately and in their original containers.	Not specifically addressed.	Exceed.	
7.6.1.4 Petroleum fuels, oils, grease and other lubricants shall be stored separate from other storage areas.	Not specifically addressed.	Exceed.	
7.6.1.5 The storage of hazardous chemicals, toxic substances and petroleum products in areas (separate lockable or otherwise contained) inside food handling areas, product and ingredient and packaging storage rooms is not acceptable.	Not specifically addressed.	Exceed.	
7.6.2 Transport			
7.6.2.1 The practices applied during loading, transport and unloading of crops shall be documented, implemented and designed to maintain appropriate storage conditions and product integrity.	VIII. Operators and others involved in the transport of fresh produce are encouraged to scrutinize product transportation at each level in the system, which includes transportation from the field to the cooler, packing facility, and on to distribution and wholesale terminal markets or retail centers. VIII.B Wherever produce is transported and handled, the sanitation conditions should be evaluated.	Comparable.	
7.6.2.2 Crops shall be transported under conditions suitable to maintain integrity and to prevent cross	VIII. Operators and others involved in the transport of fresh produce are encouraged to scrutinize product	Comparable.	

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contamination and spoilage.	transportation at each level in the system, which includes transportation from the field to the cooler, packing facility, and on to distribution and wholesale terminal markets or retail centers. VIII.B Wherever produce is transported and handled, the sanitation conditions should be evaluated. VIII.B.2.0 Maintain proper temperatures to help ensure both the quality and safety of fresh produce. Operators should work with transporters to ensure adequate control of transport temperatures from the loading dock to the receiving dock. Transporters should be aware of temperature requirements for produce being hauled and avoid delivery of mixed loads with incompatible refrigeration requirements.		
7.6.2.3 Employees involved in loading, transport and unloading events shall be appropriately trained.	VIII.B.2.0 Workers involved in the loading and unloading of fresh produce during transport should practice good hygiene and sanitation practices.	Comparable.	
7.6.3 Transport from Field to Packhouse			
7.6.3.1 A written procedure and checklist to verify cleanliness and functionality of shipping units shall be implemented.	Not specifically addressed.	Exceed.	
7.6.3.2 Loading and unloading procedures shall include provisions to minimize damage and prevent contamination to produce.	VIII.B.2.0 Load produce in trucks or transport cartons in a manner that will minimize damage. All fresh produce should be carefully loaded in trucks or transport cartons in a manner designed to minimize physical damage to the produce and to reduce the potential for contamination during transport. Produce should also be loaded so as to allow proper refrigerated air circulation.	Comparable.	
7.7 Soil Management			
7.7.1 Use of Fertilizers (Soil Amendments)			
7.7.1.1 Inorganic (chemical) and organic (manure) soil amendments shall be isolated and stored separately so as not to pose a food safety risk.	Not specifically addressed.	Exceed.	
7.7.1.2 Provision shall be made for the storage of concentrated and diluted liquid soil amendments in	Not specifically addressed.	Exceed.	

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bunded tanks designed to retain at least 110% of total volume.			
7.7.1.3 Soil amendments shall be stored separate from crop, field or irrigation water sources such that contamination from run off is avoided either by locating of the soil amendment a suitable distance from the crop or by the utilization of other physical barriers.	III.B.2.2 Manure storage (biological soil amendments) and treatment sites should be situated as far as practicable from fresh produce production and handling areas. Minimize contamination of produce from manure in open fields, compost piles, or storage areas. Manure storage or treatment sites close to fresh produce fields or packinghouses increase the risk of microbial contamination. Thus, manure storage and treatments sites should be situated as far as practicable from fresh produce production and handling areas. The minimum distance necessary will depend on many factors, including farm layout and the slope of the land, what runoff controls are in place, the likelihood of wind-spread or heavy rainfall, and the quantity of manure and how it is contained. Consider barriers or physical containment to secure manure storage or treatment areas where contamination from runoff, leaching, or wind spread is a concern. Physical containment may include concrete block, soil berms, pits, or lagoons. Practices such as storage on concrete slabs or in clay lined lagoons may reduce the potential of leachate entering groundwater. Consider good agricultural practices to minimize leachate from manure storage or treatment areas contaminating produce. Rainfall onto a manure pile can result in leachate, potentially containing pathogens. Growers may want to consider covering manure piles, such as storing manure under a roof or covering piles with an appropriate covering. Alternatively, growers may consider collecting water that leaches through manure that is being stored or treated. Collecting leachate allows the grower to control its disposal (e.g., on a vegetative grass way) or use (e.g., to control moisture during composting). Leachate may pose a microbial hazard similar to the manure from which it originates. Growers using manure leachate or manure tea in fresh produce production areas should follow good agricultural practices, such as maximizing time between application and harvest, to minimize microbial hazards.	Comparable.	

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7.7.1.4 An inventory of all organic and inorganic soil amendment storage and use shall be maintained.	Not specifically addressed.	Exceed.	
7.7.2 Soil Amendment			
7.7.2.1 No raw untreated manure shall be used. Soil amendment treatment and application methods shall be documented and implemented and designed to prevent contamination of product.	III.B.2.2.1 Consider incorporating (untreated) manure into the soil prior to planting. Applying raw manure, or leachate from raw manure, to produce fields during the growing season prior to harvest is not recommended. Maximize the time between application of manure to produce production areas and harvest. Where it is not possible to maximize the time between application and harvest, such as for fresh produce crops which are harvested throughout most of the year, raw manure should not be used. III.B.2.2.2 Apply good agricultural practices that ensure that all materials receive an adequate treatment.	Exceed.	GAPs has no documentation requirement. GAPs does not recommend application of raw manure to produce fields; SQF prohibits it.
7.7.2.2 Soil amendment protocol shall outline the methods used to treat manure and other untreated organic fertilizers ensuring: i. The treatment methods applied inactivate pathogens in organic soil amendments; ii. A hazard analysis of organic soil amendments treatment methods is conducted before use; iii. Treatment methods are validated and treatments of organic soil amendments are verified as being in compliance with the method applied; iv. Records of the validation and verification of organic soil amendment treatments are maintained.	III.B.2.1.2. Active treatments include pasteurization, heat drying, anaerobic digestion, alkali stabilization, aerobic digestion, or combinations of these. Composting is an active treatment commonly used to reduce the microbial hazards of raw manure. It is a controlled and managed process in which organic materials are digested, aerobically or anaerobically, by microbial action. When composting is carefully controlled and managed, and the appropriate conditions are achieved, the high temperature generated can kill most pathogens in a number of days. III.B.2.2.2 Apply good agricultural practices that ensure that all materials receive an adequate treatment. The specific requirements of any treatment to reduce pathogens depend on many factors, including types of organic materials being treated, pH, moisture content, process management, the carbon/nitrogen balance of the organic materials, and even climatic factors such as rainfall and temperature.	Exceed	While GAPs doesn't specifically require validation, it does make clear that composting is an active treatment process, with controlled steps and the need for managed conditions. It would appear that although GAPs is not specific in requiring validation of treatment parameters, in order to actually compost in the way it is laid out in GAPs, the operator would need to use an industry standard composting method—albeit not requiring per se validation. Further records are not required to be retained. Thus, validation and records are the key distinctions between SQF and GAPs.

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	Whatever parameters are selected, growers and manure suppliers should apply good agricultural practices that ensure that all materials receive an adequate treatment, such as thorough mixing and turning outside edges into the center of a compost pile. Cold spots or other pockets that do not receive an adequate treatment can re-contaminate the rest of the batch.		
7.7.2.3 Soil amendment protocol shall outline the methods to ensure organic soil amendment applications are timed to pose minimum risk to product safety and human health including: i. All applications of soil amendments are in accordance with national or local guidelines, best practices and codes of Good Agricultural Practice; ii. Equipment used for soil amendment application is maintained in good condition and calibrated to ensure accurate application; iii. Records of all equipment maintenance and calibration are maintained; iv. Signage complies with national and local codes of practice; and v. Sufficient data is recorded to provide a detailed record of soil amendment applications.	III.B.2.2.2 Treated Manure. Natural fertilizers, such as composted manure, and fertilizers containing natural components, should be processed and handled in a manner to reduce the likelihood of introducing pathogens into produce production areas. Growers using treated manure may want to consider some of the recommendations made for untreated manure, such as maximizing time between application and harvest. Avoid contamination of fresh produce from manure that is in the process of being composted or otherwise treated. Apply good agricultural practices that ensure that all materials receive an adequate treatment. - The specific requirements of any treatment to reduce pathogens depend on many factors, including types of organic materials being treated, pH, moisture content, process management, the carbon/nitrogen balance of the organic materials, and even climatic factors such as rainfall and temperature. - Whatever parameters are selected, growers and manure suppliers should apply good agricultural practices that ensure that all materials receive an adequate treatment, such as thorough mixing and turning outside edges into the center of a compost pile. Cold spots or other pockets that do not receive an adequate treatment can re-contaminate the rest of the batch. - Growers purchasing manure should obtain a specification sheet from the manure supplier for each shipment of manure containing information about the method of treatment. - Growers should contact state or local manure handling experts for advice specific to their individual operations	Exceed.	GAPs doesn't address: *national or local guidelines. *equipment. *records. *signage.

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	and regions. - Assistance may be available through agricultural colleges or cooperative extension services.		
7.7.3 Purchasing Chemicals			
7.7.3.1 Chemicals shall be purchased from an approved supplier in accordance with applicable legislation. An inventory of all chemicals purchased and used shall be maintained.	No specifically addressed.	Exceed.	
7.7.4 Agricultural Chemicals			
7.7.4.1 A crop protection action plan indicating the applications used for a target pest or disease and the threshold levels that initiate application shall be prepared and implemented.	Not specifically addressed.	Exceed.	GAPs only covers microbial hazards. It doesn't deal with chemical hazards.
7.7.4.2 If product is intended for export, agricultural chemical use shall consider requirements in the intended country of destination.	Not specifically addressed.	Exceed.	
7.7.4.3 The person making decisions on chemical application shall: i. Demonstrate knowledge of, and access to, information regarding chemical applications and the maximum residue limits allowable in destination markets; ii. Use only chemicals approved for cultivation of specific fruits and vegetables, and approved for use in the intended market; iii. Demonstrate competence and knowledge of chemical application and crop withholding periods; iv. Ensure crop applications and application rates for target pests and diseases comply with label recommendations; v. Demonstrate the timing between chemical application and harvest complies with the approved harvest interval for the chemical applied;	Not specifically addressed.	Exceed.	

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vi. Maintain a current chemical register and keep records of all chemicals use. Records of chemical use shall include the date of application, the chemical used, the crop sprayed, the concentration, method and frequency of application.			
7.7.4.4 Only biological controls that are authorized for the cultivation of the specific fruit or vegetable shall be used, and in accordance with label instructions.	Not specifically addressed.	Exceed.	
7.7.4.5 The producer shall dispose of chemical waste and empty containers in accordance with regulatory requirements and ensure that: i. Empty chemical containers are not re-used; ii. Empty containers are labeled, isolated and securely stored while awaiting collection; iii. Unused and obsolete chemicals are stored under secure conditions while waiting authorized disposal by an approved vendor.	Not specifically addressed.	Exceed.	
7.8 Harvesting			
7.8.1 Pre-harvest Assessment			
7.8.1.1 A pre-harvest risk assessment procedure shall be in place that describes when the assessment is performed and identifies those conditions that may be reasonably likely to result in physical, chemical, or biological contamination.	Not specifically addressed.	Exceed.	GAPs does not deal with chemical or physical hazards.
7.8.1.2 Knives and cutting instruments used in harvesting operations shall be controlled, and kept clean and well maintained.	VI.B.2.0 Equipment Maintenance. Field equipment, such as harvesting machinery, knives, containers, tables, baskets, packaging materials, brushes, buckets, etc., can easily spread microorganisms to fresh produce. Operators should consider the following guidelines: Use harvesting and packing equipment appropriately and keep it as clean as practicable.	Comparable.	

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7.8.1.3 A written policy regarding the storage of harvesting containers shall be implemented and maintained.	VI.B.2.0 Keep harvest containers clean to prevent cross-contamination of fresh produce. Harvest containers used repeatedly during a harvest should be cleaned after each load is delivered and prior to reuse. If the containers are stored outside, they should be cleaned and sanitized before being used to haul fresh produce.	Comparable.	
7.8.2 Foreign Matter and Glass Procedures			
7.8.2.1 The methods used to prevent foreign matter and glass contamination of product shall be documented and implemented.	Not specifically addressed.	Exceed.	GAPs does not cover physical hazards.
7.8.2.2 Containers, equipment and other utensils made of glass, porcelain, ceramics, brittle plastic or other like material shall not be permitted where exposed product is handled unless an effective foreign material and glass protocol is documented and implemented.	Not specifically addressed.	Exceed.	
7.8.2.3 Regular inspections shall be conducted to ensure food handling/contact zones areas are free of glass and brittle plastic and employees are to be made aware of their responsibility to adhere to the organization's Foreign Matter and Glass Protocol.	Not specifically addressed.	Exceed.	
7.8.2.4 Glass covered instrument dial covers shall be checked at the start and finish of each shift to ensure their covers have not been damaged.	Not specifically addressed.	Exceed.	
7.9 Waste Disposal			
7.9.1 Dry, Liquid and Unsanitary Waste Disposal			
7.9.1.1 Waste shall be regularly removed from the farm, field, packing facility and the surrounds so as not to pose a food safety risk to finished product or growing, harvesting and packing operations.	V.B.2.0 Sewage Disposal. Improper disposal of human waste from toilets could lead to water, soil, animal, crop, or worker contamination. Systems and practices should be in place to ensure safe management and disposal of waste from permanently installed or portable toilets to prevent drainage into the field. VII.B.2.0 Clean product storage areas regularly. Remove, as much as practicable, all visible debris, soil, dirt, and unnecessary items from product storage areas on an ongoing basis. Clean these areas on a regularly scheduled and "as needed" basis and take steps to minimize free-	Comparable.	

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	floating dust and other airborne contaminants.		
7.9.1.2 The responsibility and methods for the effective and efficient disposal of all solid waste including inedible material and disused packaging, and liquid and unsanitary waste shall be documented and implemented.	Not specifically addressed.	Exceed.	

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