CHECKLIST
BMPs for VEGETABLE PRODUCTION
GOOD AGRICULTURAL PRACTICES

Good Agricultural Practices (GAPs) are those procedures designed to minimize the contamination of fresh produce with microbial pathogens in every step from production to food preparation. The goal is prevention of contamination; once contaminated the removal or killing of pathogens on produce is very difficult. Prevention is strongly favored over treatments to eliminate contamination. Documentation of implementation of prevention programs and food safety awareness training for workers are key components of a food safety program.

Field and Greenhouse Management

√ Production fields should not be located where they may receive runoff or drift from animal operations.
√ All potential sources of contamination should be identified and eliminated.
√ Domestic animals and livestock should be excluded from fields during growing and harvesting operations.
√ Wild animal presence should be minimized to the degree possible by methods identified by wildlife experts.
√ Establish and maintain a pest control program such as removal of debris that might provide a habitat for pest populations.

Manure Application

√ Apply only properly composted manures on vegetable fields.
√ Document manures used, the dates and methods of composting, and application dates.
√ Do not apply non-composted manure within 120 days of harvest.
√ Incorporate manure into soil.

Irrigation Water

√ Ensure that all water used for irrigation is not contaminated with animal or human feces and meets the standards for recreational use.
√ Identify potential sources of contamination of irrigation water and control those within your ability.
√ Become familiar with the routes and handling of surface waters.
√ Ensure that wells are designed and maintained in a manner that prevents surface runoff and soil infiltration.
√ Water used for all foliar applications should be potable water and pathogen-free.
√ Allow for approved water treatment methods to bring water into compliance with required standards.
√ Document the source of irrigation water for each crop. Maintain records of testing of agricultural waters.

Worker Health and Hygiene

√ Follow all OSHA (29 CFR 1928.110) and FDA (Title 21 CFR 110) requirements for field sanitary facilities.

- √ Establishing a training program on worker hygiene including hand washing and the importance of using toilet facilities.
- √ Establish and communicate a clear policy that will allow ill workers to be reassigned to activities that do not involve food or food surface contact.
- √ Document and monitor worker hygiene and sanitation practices and improve practices through additional training.
- √ Provide protective coverings or bandages to workers with cuts or lesions.
- √ Provide instruction on proper use of gloves to prevent pathogen transfer.
- √ Properly service portable toilets in the field to prevent spills and leakage.
- √ Have a plan for product isolation, diversion, containment, and destruction in case of a spill.

Harvest

- √ All harvest containers and food contact surfaces should be cleaned before use.
- √ Ensure that harvest crews are aware of microbial food safety risk reduction and adhere to safe food practices.
- √ All equipment that touches fresh produce is a food contact surface and must be cleaned and sanitized as such.
- √ Develop and document a system for cleaning and sanitizing food contact surfaces.
- √ No final use containers such as corrugated boxes should be used in the field. Use only those containers that can be easily cleaned and sanitized.
- √ Minimize the opportunity for vectors to contaminate harvest equipment left in the field (such as no damaged fruit left on belts).
- √ Dirt and debris should be removed from produce to the degree possible in the field.
- √ Remove damaged or injured fruit to the extent possible in field.
- √ All water used during harvest operations should be potable and meet standards for recreational use.
- √ Required record keeping includes environmental review, water usage, record of completed education and training, pest control and production practices.

“Pick Your Own” Operations

- √ Pets are not allowed into “pick your own” areas.
- √ Toilet facilities and hand washing stations are available for customers and are clean and regularly serviced. Facilities must be regularly supplied with toilet paper, paper towels, soap, water, and trash can.
- √ Portable toilets must be maintained to prevent wastewater from contaminating fields.
- √ Use signs and fact sheets to promote hand washing and safe food handling. Encourage customers to wash hands after animal contact and toilet use.
- √ Receptacles are provided for customer trash.
- √ Clean containers are available for customer purchase and/or use.
- √ Produce that is picked by the general public cannot be sold retail.
- √ Children in fields are properly supervised by adults at all times. Establish guidelines for customers with children in field and prohibit diaper changing in the field.

Packing House Facilities and Post Harvest Handling

√ Design and maintain packing surfaces and equipment to minimize damage to produce and to maximize accessibility for cleaning and sanitizing.
√ Establish routine cleaning and sanitizing programs for all food contact surfaces.
√ Remove as much dirt and debris from harvest containers outside of packing house. Isolate debris removal from water sources used in post harvest handling.
√ Establish and monitor careful procedures to identify and remove injured and damaged produce.
√ Diligent removal of injured produce will provide the best opportunity to reduce microbial contamination.
√ Prevent birds and other vectors from contaminating packing equipment surfaces, packing areas, and storage areas.
√ Establish and maintain a pest control program in packing facility.
√ Exclude domestic or other animals from packing facility.
√ Store unformed or empty containers off the floor and in a way to prevent them from contamination.
√ Surface waters are not permitted for any post harvest uses or in the packing house.
√ Use potable water in dump tank, flume, and in cleaning, grading, or cooling areas. Monitor the quality of water in all operations.
√ Maintain water temperatures at 10° F above incoming produce temperature to prevent intrusion of microorganisms into produce.
√ Antimicrobial chemicals help to minimize microbial contamination spread by packing house water. Regularly monitor and records levels of antimicrobial chemicals to ensure they are maintained at appropriate levels.
√ Toilet and sanitary facilities must be provided and maintained in a clean and sanitary manner.
√ Sanitary hand washing facilities should be provided and maintained in a clean and sanitary manner at all times.
√ Hand washing must be performed by all employees after toilet use.
√ Only chemicals allowed by the U.S. Food and Drug Administration should be used for food contact.

Storage and Transportation

√ Keep air-cooling and chilling equipment clean and sanitary
√ Make ice from potable water**.** Transport, store, and use ice under sanitary conditions.
√ Inspect transportation vehicles for cleanliness, odors, dirt, and debris before loading. Insist on clean-out if necessary.
√ Verify records of previous loads to prevent cross contamination.
√ Ensure that the integrity of positive lot identification and traceback systems are maintained by transporters, distributors, and retailers.

Record Keeping

√ All required record keeping shall be for 3 calendar years and include:
- Product packed, shipped, handled

- Product transported or stored
- Standard Operating Procedures and Sanitation Standard Operating Procedures
- Sanitation Monitoring Records for chlorination, pH, wash water temperature, and any other approved method of sanitizing.
- Testing and Monitoring Records for water usage, microbial monitoring of wash waters, well water, and surface irrigation water monitoring.
- Calibration of any automated equipment to monitor chlorine, pH measuring device, thermometer, any microbial testing of product or equipment.
- Sanitation Monitoring Records
- Daily logs of sanitation procedures
- Housekeeping sanitation records
- Equipment sanitation records
- Monitoring records for hand washing facilities and toilets

Good Agricultural Practices (GAPs)

Food Safety Manual

This Manual Was Written and compiled by:

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David Nyachuba, Ph.D.
Director of UMass Extension Food Safety Education Program, Amherst, Massachusetts.

A. Richard Bonanno, Ph.D.
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Section 1

- GAP and Its Impact on You as the Grower
  by A. Richard Bonanno, Ph.D.

Section 2

- What Initiated the Need for a Food Safety Plan
  by Wesley L. Kline, Ph.D.
- Problems Observed During the 2008 Audits
  by Wesley L. Kline, Ph.D.
- USDA Checklist Third Party Audit
  by Wesley L. Kline, Ph.D.

Section 3

- Pathogens Commonly Associated with Fresh Produce: How can they be controlled?
  by David Nyachuba, Ph.D.

Section 4

Developing a Plan for Third-Party Audits - Guidelines
by Wesley L. Kline, Ph.D.

- Introduction: Getting Started and General Questions
- **GAP Forms:**
  - USDA Good Agricultural Practices & Good Handling Practices Audit Verification Checklist pages 1 – 5
  - Water Source Testing Log
  - Employee Food Safety Education and Training Log
  - Handwashing (poster)
  - Visitor Sign In Sheet
  - Health and Safety Notice
  - Toilet Paper Use (poster)
  - Restroom and Toilet Facility Maintenance Log
- Farm Review
- **GAP Forms:**
  - USDA Good Agricultural Practices & Good Handling Practices Audit Verification Checklist pages 6 – 9
  - Water Source Testing Log
  - Animal Monitoring Log
  - Manure Application Log
- Field Harvest and Field Packing Activities
- **GAP Forms:**
  - USDA Good Agricultural Practices & Good Handling Practices Audit Verification Checklist pages 10 – 12
  - Handwashing Fact Sheet
  - Handwashing (poster)
  - Restroom and Toilet Facility Maintenance Log
  - Toilet Use (poster)
  - Toilet Paper Use (poster)
  - Harvesting Container Sanitization Log
  - Field Harvesting Equipment and Transportation Sanitization
  - Water Source Testing Log
  - Field Harvest & Field Packing Inspecting
- House Packing Facility
- **GAP Forms:**
  - USDA Good Agricultural Practices & Good Handling Practices Audit Verification Checklist pages 13 – 15
  - Water Source Testing Log
  - Ice Sanitation Log
  - Packing House and Storage Cleaning Recommendations
  - Packing House and Storage Facility-Daily Inspection Log
  - Packing House and Storage Facility-Monthly Inspection Log
  - Packing House and Storage Facility-Quarterly Inspection Log
  - Produce Disinfection Log
  - Please Note Hairnet
  - Bait Station Control Log

- Storage and Transportation
- **GAP Forms:**
  - USDA Good Agricultural Practices & Good Handling Practices Audit Verification Checklist pages 16 – 18
  - Harvesting Container Sanitization Log
  - Packing House and Storage Cleaning Recommendations
  - Packing House and Storage Facility-Daily Inspection Log
  - Packing House and Storage Facility-Monthly Inspection Log
  - Packing House and Storage Facility-Quarterly Inspection Log
  - Bait Station Control Log
  - Water Source Testing Log
  - Ice Sanitation Log
  - Storage Temperature Log
  - Thermometer Log
  - Carrier Monitoring Log
- Traceback
- **GAP Forms:**
  - USDA Good Agricultural Practices & Good Handling Practices Audit Verification Checklist page 19
- References

Section 5

Audit Form and Scoresheet

- USDA Good Agricultural Practices & Good Handling Practices Audit Verification Checklist pages 1 – 28
- Good Agricultural Practices & Good Handling Practices Systems Audit Scoresheet

Section 6

- Massachusetts Department of Agricultural Resources (MDAR) (USDA GAP & GHP Audit Program)
  GAP 2009 Cost Share Letter and Form
- Massachusetts Department of Agricultural Resources (MDAR) (USDA GAP & GHP Audit Program)
  GAP 2009 Cost Share Letter and Form
- USDA GAP & GHP Audit Application
- USDA GAP & GHP Audit Application
- Massachusetts Water Quality Standards (Short Version) and USDA GAP & GHP Contact Info
- USDA GAP & GHP Client Requested Audit Verification Checklist

Section 7

Sample Food Safety Plans

- A Food Safety Plan Developed In New York As an Example for Growers
- The Henderson Farm Grower Food Safety Manual

Section 8

MA Water Quality Standards and Testing in Massachusetts

- Frequently Asked Questions about Water Quality Standards and Microbial Testing in Massachusetts
- Massachusetts Water Quality Standards (Short Version) and USDA GAP & GHP Contact Info
- Massachusetts Water Quality Standards (Long Version)
- Resource Information and Websites: Agricultural Water
- Resource Information: Drinking Water
- Resource Information: Water Disinfection

Section 9

Additional Educational Materials

- Guidance for Industry: Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables
- Commodity Specific Food Safety Guidelines for the Lettuce and Leafy Greens Supply Chain. 1st Edition. 2006. Prepared by International Fresh-cut Produce Association, Produce Marketing Association, United Fresh Fruit and Vegetable Association, and Western Growers
- Key Points and Control and Management of Microbial Food Safety: Information for Growers, Packers, and Handlers of Fresh-Consumed Horticultural Products – Publication 8102. By Suslow, C.V., University of California (UC) Cooperative Extension Specialist, Department of Vegetable Crops, UC Davis
- Food Safety at Farmers Markets and Agritourism Venues – A publication of the UC Small Farm Center
- Did you know? In the Field there is a need for hygiene too! (English and Spanish)
- Good Hygiene Protects Everyone (English and Spanish)
- Food Safety Begins on the Farm: A Grower's Guide - (English or Spanish)
- Laminated Handwashing Poster (English and Spanish)
- Safe Handling of Raw Produce and Fresh-Squeezed Fruit and Vegetable Juices
- Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables

- Food Safety Word List

Section 10

Appendices

- Commercial Laboratories Engaged in the Analysis of Food Products within the Massachusetts Vicinity
- Equipment, Supplies and Service
- *Resource Information and Websites*
    - Food Safety/GAPs
    - Composting
    - Consumer Information
    - Farmers' Markets
    - Handwashing
    - Pathogens
    - Sanitation
    - Traceback

About Authors:

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David Nyachuba, Ph.D.
David Nyachuba is an Assistant Professor at University of Massachusetts Amherst Department of Nutrition and Director of UMass Extension Food Safety Program. He serves as Principal Investigator on the UMass GAP project. He teaches several food safety courses. In the lab, he studies foodborne pathogenic bacteria with an emphasis on *Listeria monocytogenes*.

A. Richard Bonanno, Ph.D.
Rich Bonanno is an Extension Educator with UMass Extension and is a co-Principal Investigator on the UMass GAP project. He is responsible for weed management in vegetable and small fruit crops. He serves as a Public Member to the Massachusetts Pesticide Control Board and is a past-president of the New England Vegetable & Berry Grower's Association.

For more information on GAPs and help in setting up a Food Safety Plan at your farm, contact:

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or

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Massachusetts Water Quality Standards and Microbial Testing

Frequently Asked Questions

WESLEY L. KLINE[1], DAVID NYACHUBA[2], AND A. RICHARD BONANNO[3]

1. Can water carry pathogens?

Yes.

2. Which pathogens associated with agricultural water are of public health concern?

Pathogens transmitted by water include

Bacteria	Parasites	Viruses
E. coli O157:H7	*Cryptosporidium parvum*	*Norwalk* virus
Salmonella spp.	*Giardia lamblia*	*Hepatitis A* virus
Vibrio cholerae	*Cyclospora cayetanensis*	
Shigella spp.	*Toxiplasma gondii*	

3. How often should I test agricultural water?

Source of water	Schedule for testing
1) Municipal water	Acquire test results from local water authority annually
2) Well water	Twice a year (beginning of season and at peak use)
3) Surface water	Three times a year (beginning of season, peak use and near harvest)

4. Which water sources must be tested?

Irrigation, spray and wash water

[1] County Agriculture Agent, Rutgers Cooperative Extension, Cumberland County, New Jersey
[2] Director of UMASS Extension Food Safety Education Program, Amherst, Massachusetts
[3] Extension Educator with UMass Extension Agricultural Resources Program, Amherst, Massachusetts

5. What should water tests include?

All tests must include fecal coliform and should be tested for generic *E. coli* with a count of the number of *E. coli* and fecal coliform units not just a presence or absence. Corrective procedures to be employed when required should be noted in the Grower Food Safety Manual (See *Water source testing log*). The report from the testing laboratory is sufficient for documentation. Note spray water must be from a good water source that does not contain pathogens above an acceptable level.

6. What are the acceptable water standards for (fecal coliform and *E. coli* levels) for irrigation?

Test	**Recommended levels***
Fecal coliform	200 CFU/100 ml
E. coli	Geometric mean of 5 samples - <126 CFU/100 ml with no sample over 235 CFU/100ml Non foliar contact - <576 CFU/100 ml

* It should be noted that the water meeting these standards may still be contaminated with protozoa and viruses.

7. Are there any instances when I do not need to test water?

Yes.

If municipal water is used, you would need to obtain an annual report from the locality that identifies the presence and levels of organisms.

8. Why is surface water not acceptable in the packing shed?

Groundwater is more likely to be contaminated with high levels of pathogens than well water and pathogen levels vary with environmental conditions.

9. Where can I have my farm water tested?

For the Online Searchable Laboratory Listing, go to the Massachusetts Department of Environmental Protection:
http://public.dep.state.ma.us/Labcert/Labcert.aspx To confirm a laboratory's certification status in MA, call (978) 682-5237 or e-mail Labcert@state.ma.us

10. Who should I contact with questions regarding water safety?

Consult state or local Departments of Environmental Protection or Public Health or extension educators. You may also contact the MA Department of Agricultural Resources.

11. What do Inland Water Classes (Classes A, B, and C) stand for?

Class A (CMR 4:05,3,a))

Potable water; not to exceed 20 *E-coli* organisms/100ml

Class B (CMR 4:05,3,b))

Suitable for irrigation; not to exceed 126 *E-coli* colonies/100ml

Class C (CMR 4:05,3,c) Standard)

Suitable for irrigation of crops used for consumption after cooking, not to exceed 630 *E-coli* colonies/100ml

For more information about Water Classes A, B, and C, see enclosed "314 *CMR4.00: DIVISION OF WATER POLLUTION CONTROL."*

12. Is there a specific way to take a water sample?

Sampling and testing methodologies can differ between different laboratories. Check with your lab to find out how you should obtain the sample.

http://www.mass.gov/dep/water/laws/regulati.htm#wqual

Massachusetts Water Quality Standards:

- **Class A** (CMR 4:05,3,a))
  - Potable water; not to exceed 20 *E-coli* organisms/100ml

- **Class B** (CMR 4:05,3,b))
  - Suitable for irrigation; not to exceed 126 *E-coli* colonies/100ml

- **Class C** (CMR 4:05,3,c) Standard)
  - Suitable for irrigation of crops used for consumption after cooking, not to exceed 630 *E-coli* colonies/100ml

Continue to the next page or visit the website above for detailed information on Massachusetts Water Quality.

Bob Rondeau, Program Coordinator
Massachusetts Department of Agricultural Resources (MDAR)
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Worker Training Log

Name of operation: **Date:**

Trainer: **Training Time:**

Location:

Training material (Please attach any written materials to this log with a staple):
Please see the food safety plan for overall Worker Training procedures.

Employee Name (please print)	**Employee Signature**
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	

Reviewed by: **Title:** **Date:**

Field Sanitation Unit Service Log

Name of operation:

Please see the food safety plan for overall field sanitation unit service procedures.

Sanitation Unit #*	Date of Cleaning	Cleaned By (name)	Date of Servicing	Serviced By (name)	Supplies Stocked**

* See field map for locations of each unit in fields.
** Sanitation supplies are single use towels, toilet paper, hand or anti-bacterial soap, potable water for hand washing.

If contracted with sanitation company, attach service/cleaning receipt.

Reviewed by: **Title:** **Date:**

Processing / Packing Line Water Log

Name of operation:

Please see the food safety plan for overall processing/packing line water control procedures.

Date	Cleaning List (check each)					Date Cleaned	Treatment	Cleaned By (name)
	Contact Surface	Dump Tanks	Flumes	Wash Tanks	Hydro Cooler			

Reviewed by: **Title:** **Date:**

Water Treatment Log

Name of operation:

Please see the food safety plan for overall water treatment procedures.

Date	Water pH Level	Type of Chemical Used	Amount Added	Type of Produce Being Run	Initials

Reviewed by: **Title:** **Date:**

Pest/Rodent Control Log

Name of operation:

Please see the food safety plan for overall Pest/Rodent control procedures.

Company Used* or self	Date of Service or action taken	Type of Pest	Type of Control**	Location of Traps	Traps Checked (date)	Checked by (name)	Disposal means

*If using a company for service, attach report or receipt of service for each of their visits.
**List type of control methods used such as exclusion, traps, poison, repellants, etc.

Reviewed by: **Title:** **Date:**

Cooler Temperature Log

Name of operation:

Cooler number: **Thermometer number:**
Please see the food safety plan for overall temperature control procedures and thermometer calibration instructions

Date	Thermometer calibrated date	Recorded temperature		Corrective actions if necessary:	Result of corrective actions and date accomplished	Initials
		AM	PM			

Reviewed by: **Title:** **Date:**

A note on calibration of your thermometer

This information on thermometer calibration is brought from “Food Store Sanitation”, 1998, Sixth Edition, Gravani, Robert B., Rishoi, Don C., Cornell University Food Industry Management Distance Education Program, Lebhar-Friedman Books, Chain Store Publishing Corp.

Melting point of ice method

1. Place ice in a container and let it melt.
2. Stir to make sure that the temperature in the ice/water mixture is uniform throughout the container.
3. When the ice is partially melted and the container is filled with a 50/50 ice and water solution, insert the thermometer and wait until the needle indicator stabilizes. The thermometer should be 32ºF (0ºC).
4. If the thermometer is not reading 32ºF (0ºC), it should be adjusted by holding the head of the thermometer firmly and using a small wrench to turn the calibration (hex) nut under the head until the indicator reads 32ºF (0ºC).

An important item to remember as you are calibrating your thermometer using the melting point of ice method is to never add tap water to ice because this will *not* be 32ºF (0ºC) but will be at a higher temperature. The calibration will be much more accurate if you use melting ice.

Truck Checklist log

Name of operation:

Please see the food safety plan for overall truck checking procedures.

Date	Trucking Company	Truck clean (Yes or No)	If no, state the problem (off odor, debris, etc.)	Corrective Action	Truck temp at Loading	Temp data logger in load (yes or no)	Initials

Reviewed By: **Title:** **Date:**

Illness/Injury Reporting log

Name of operation:

Please see the food safety plan for overall illness/injury reporting procedures.

Date	Name of Employee	Injury sustained/ Illness reported	Action taken (ice applied, bandaged, sent to hospital, etc.)	Did employee return to work? (Yes or No)	Initials

Reviewed By: **Title:** **Date:**

First Aid Kit Monitoring log

Name of operation:

Please see the food safety plan for overall first aid kit monitoring.

Date	Location of First Aid Kit or #	Checked & Stocked	If restocked, list added items here (band aids, ointment, etc)	Initials

Reviewed By: **Title:** **Date:**

Manure Applications log

Name of operation:

Please see the food safety plan for overall manure application procedures

Date	Field Applied	Rate	Incorporated (Yes or No)	Supplier	Crop Planted (Type and Date)	Crop Harvested (Date)	Initials

Reviewed By: **Title:** **Date:**

Surface Water Testing Log

Name of operation:

Please see the food safety plan for overall information on surface water testing.
Save any document providing information on test methods and test results from your laboratory.

Date	Surface water location/name	Laboratory	Results	Corrective actions if necessary	Initials

Reviewed by: **Title:** **Date:**

Mock Traceback Log

Name of operation: **Date:**

Conducted by: **Lot:**

Product traced:

Please see the food safety plan for overall traceback procedures.

Step backward					Step forward		
Harvest date	**Harvester**	**Packing date**	**Packer**	**Shipping date**	**Customer(s) contacted**	**Amount of product remaining from original shipment at customer**	**Disposition of product which could not be recalled**

Reviewed by: **Title:** **Date:**

Visitor Log

Name of operation:

Please see the food safety plan for information on food safety procedures for visitors.

Date	Enter time	Visitor	Badge number	Host	Exit time

Reviewed by: **Title:** **Date:**

USDA Good Agricultural Practices & Good Handling Practices
Audit Verification Checklist

This program is intended to assess a participant's efforts to minimize the risk of contamination of fresh fruits, vegetables, nuts and miscellaneous commodities by microbial pathogens based on the U.S. Food and Drug Administration's *"Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables."*

Firm Name: _____

Contact Person: _____

Audit Site(s): _____

Main Address: _____

State: _____ **Zip:** _____ **Telephone No:** _____

Fax: _____ **E-mail:** _____

Auditor(s): (list all auditors with the lead listed first) _____

_____

USDA or Fed-State Office performing audit: _____

Date & Time Arrived: _____ **Date & Time Departed:** _____

Travel Time: _____ **Code:** _____

Person(s) Interviewed: (use back of sheet if necessary to list all persons interviewed)_____

_____

_____

Did the auditee participate in GAP & GHP training?

Yes ☐ **No** ☐

Is there a map that accurately represents the farm operations?

Yes ☐ **No** ☐

Legal Description/GPS/Lat.-Long. of Location: _____

Are all crop production areas located on this audit site?

Yes ☐ **No** ☐

Total acres farmed (Owned, leased/rented, contracted, consigned): _____

Does the company have more than one packing facility?

Yes ☐ **No** ☐

Is there a floor plan of the packing house facility(s) indicating flow of product, storage areas, cull areas, employee break rooms, restrooms, offices?

Yes ☐ **No** ☐

Is any product commingled prior to packing?

Yes ☐ **No** ☐

Audit Scope: (Please check all scopes audited)

General Questions (All audits must begin with and pass this portion)

Part 1 – Farm Review……☐

Part 2 - Field Harvest and Field Packing Activities ……..……☐

Part 3 - House Packing Facility ……..☐

Part 4 – Storage and Transportation ……..……☐

Part 5 – Traceback ……..……☐

Part 6 – Wholesale Distribution Center/Terminal Warehouses……..……☐

Part 6A – Traceback for Wholesale Distribution Center/Terminal Warehouse ...…..☐

Part 7 – Preventive Food Security Procedures……..……..☐

Products: _____

Auditors' Signature(s): _____

_____

_____

_____

Conditions Under Which an Automatic "Unsatisfactory" Will be Assessed

- **An immediate food safety risk is present when produce is grown, processed, packed or held under conditions that promote or cause the produce to become contaminated.**
- **The presence or evidence of rodents, an excessive amount of insects or other pests in the produce during packing, processing or storage.**
- **Observation of employee practices (personal or hygienic) that have jeopardized or may jeopardize the safety of the produce.**
- **Falsification of records.**
- **Answering of Questions G1 or G2 as "NO".**

Auditor Completion Instructions

- **For clarification and guidance in answering these questions, please refer to the Good Agricultural Practices & Good Handling Practices Audit Verification Program Policy and Instruction Guide.**
- **Place the point value for each question in the proper column (Yes, No, or N/A).**
- **Gray boxes in the "N/A" column indicate that question cannot be answered "N/A".**
- **"D" in the Doc column means that documentation will be requested/reviewed by the auditor.**
- **Any "N/A" or "No" designation must be explained in the comments section.**

General Questions

Implementation of a Food Safety Program

Questions		Points	YES	NO	N/A	Doc
G-1	A documented food safety program that incorporates GAP and/or GHP has been implemented.	15				D
G-2	The operation has designated someone to implement and oversee an established food safety program. Name _____	15				D

Worker Health & Hygiene

Questions		Points	YES	NO	N/A	Doc
G-3	Potable water is available to all workers.	10				D
G-4	Training on proper sanitation and hygiene practices is provided to all staff.	15				D
G-5	Readily understandable signs are posted to instruct employees to wash their hands before beginning or returning to work.	10				
G-6	Employees are required to wash their hands before beginning or returning to work.	10				D
G-7	All employees and all visitors to the location are required to follow proper sanitation and hygiene practices.	10				D
G-8	Employees and visitors are following good hygiene/sanitation practices.	15				
G-9	All toilet/restroom/field sanitation facilities are clean. They are properly supplied with single use towels, toilet paper, and hand soap or anti-bacterial soap and potable water for hand washing.	15				
G-10	All toilet/restroom/field sanitation facilities are serviced and cleaned on a scheduled basis.	10				D
G-11	Smoking and eating are confined to designated areas separate from where product is handled.	10				
G-12	Workers with diarrheal disease or symptoms of other infectious disease are prohibited from handling fresh produce.	15				D

	Questions	Points	YES	NO	N/A	Doc
G-13	There is a policy describing procedures which specify handling/disposition of produce or food contact surfaces that have come into contact with blood or other body fluids.	15				D
G-14	Workers are instructed to seek prompt treatment with clean first aid supplies for cuts, abrasions and other injuries.	5				D
G-15	Company personnel or contracted personnel that apply regulated pre-harvest and/or post harvest materials are licensed. Company personnel or contracted personnel applying non-regulated materials have been trained on its proper use.	10				D

COMMENTS:

Total points for GENERAL QUESTIONS _____

Total possible = **180** **Less Justified "N/A"** **_____**

Adjusted Total **_____** **Passing Score _____**
X .8 (80%) USDA

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Part 1 – Farm Review

Water Usage

(1-1) What is the source of irrigation water? (Pond, Stream, Well, Municipal, Other) please specify

_____

(1-2) How are crops irrigated? (Flood, Drip, Sprinkler, Other) please specify

_____

Questions		Points	YES	NO	N/A	Doc
1-3	Water quality is known to be adequate for the crop irrigation method and crop being irrigated.	10				D
1-4	Water quality is known to be adequate for chemical application or fertigation method.	10				D
1-5	If necessary, steps are taken to protect irrigation water from potential direct and non-point source contamination.	15				

Sewage Treatment

Questions		Points	YES	NO	N/A	Doc
1-6	The farm sewage treatment system/septic system is functioning properly and there is no evidence of leaking or runoff.	15				
1-7	There is no municipal/commercial sewage treatment facility or waste material landfill adjacent to the farm.	10				

Animals/Wildlife/Livestock

Questions		Points	YES	NO	N/A	Doc
1-8	Crop production areas are not located near or adjacent to dairy, livestock, or fowl production facilities.	15				
1-9	Manure lagoons located near or adjacent to crop production areas are maintained to prevent leaking or overflowing, or measures have been taken to stop runoff from contaminating the crop production areas.	10				
1-10	Manure stored near or adjacent to crop production areas is contained to prevent contamination of crops.	10				
1-11	Measures are taken to restrict access of livestock to the source or delivery system of crop irrigation water.	5				

	Questions	Points	YES	NO	N/A	Doc
1-12	Measures are taken to reduce the opportunity for wild and/or domestic animals to enter crop production areas.	5				
1-13	Crop production areas are monitored for the presence or signs of wild or domestic animals entering the land.	5				D

Manure and Municipal Biosolids

Please choose one of the following options as it relates to the farm operation:

_____ **Option A. Raw manure or a combination of raw and composed manure is used as a soil amendment.**

_____ **Option B. Only composed manure/treated municipal biosolids are used as a soil amendment.**

_____ **Option C. No manure or municipal biosolids of any kind are used as a soil amendment.**

<u>Only answer the following manure questions (questions 1-14 to 1-22) that are assigned to the Option chosen above.</u> DO NOT answer the questions from the other two options. The points from the manure and municipal biosolids are worth 35 of a total 155 points, and answering questions from the other two options will cause the points to calculate incorrectly.

	Option A: Raw Manure	Points	YES	NO	N/A	Doc
1-14	When raw manure is applied, it is incorporated at least 2 weeks prior to planting or a minimum of 120 days prior to harvest.	10				D
1-15	Raw manure is not used on commodities that are harvested within 120 days of planting.	10				
1-16	If a combination of raw and treated manure is used, the treated manure is properly treated, composted or exposed to reduce the expected levels of pathogens.	10				D
1-17	Untreated manure is properly stored prior to use.	5				
	Option B: Composted Manure	**Points**	**YES**	**NO**	**N/A**	**Doc**
1-18	Only composted manure and/or treated biosolids are used as a soil amendment.	10				D
1-19	Composted manure and/or treated biosolids are properly treated, composted, or exposed to environmental conditions that would lower the expected level of pathogens.	10				D

	Questions	Points	YES	NO	N/A	Doc
1-20	Composted manure and/or treated biosolids are properly stored and are protected to minimize recontamination.	10				
1-21	Analysis reports are available for composted manure/treated biosolids.	5				D
	Option C: No Manure/Biosolids Used					
1-22	No animal manure or municipal biosolids are used.	35				

Soils

	Questions	Points	YES	NO	N/A	Doc
1-23	Previous land use history indicates that there is a minimum risk of produce contamination.	5				
1-24	When previous land use history indicates a possibility of contamination, preventative measures have been taken to mitigate the known risks and soils have been tested for contaminants and the land use is commensurate with test results.	10				D
1-25	Crop production areas that have been subjected to flooding are tested for potential microbial hazards.	5				D

COMMENTS:

Total points for PART 1 _____

Total possible = 165 **Less Justified "N/A" _____**

Adjusted Total _____ **Passing Score _____**
X .8 (80%) USDA

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Part 2 - Field Harvest and Field Packing Activities

Field Sanitation and Hygiene

Questions		Points	YES	NO	N/A	Doc
2-1	The number, condition, and placement of field sanitation units comply with applicable state and/or federal regulations.	10				
2-2	If field sanitation units are not used and are not required by applicable state or federal regulations, a toilet facility is readily available for all workers.	15				
2-3	Field sanitation units are located in a location that minimizes the potential risk for product contamination and are directly accessible for servicing.	10				
2-4	In the event of a major spill or leak of field sanitation units or toilet facility, a response plan is in place, and field sanitation units or toilet facilities are directly accessible for the response team.	10				D

Field Harvesting and Transportation

Questions		Points	YES	NO	N/A	Doc
2-5	All harvesting containers (including bulk hauling vehicles) that come in direct contact with product are cleaned and/or sanitized prior to use and kept as clean as practicable.	5				D
2-6	All hand harvesting implements (knives, pruners, machetes, etc.) are kept as clean as practical and are disinfected on a scheduled basis.	5				D
2-7	Damaged containers are properly repaired or disposed of.	5				
2-8	Harvesting equipment and/or machinery which comes into contact with product is in good repair.	10				
2-9	Light bulbs and glass on harvesting equipment are protected so as not to contaminate produce or fields in the case of breakage.	10				

	Questions	Points	YES	NO	N/A	Doc
2-10	There is a standard operating procedure or instructions on what measures should be taken in the case of glass/plastic breakage and possible contamination during harvesting operations.	5				D
2-11	There is a standard operating procedure or instructions on what measures should be taken in the case of product contamination by chemicals, petroleum, pesticides or other contaminating factors.	5				D
2-12	Measures are taken during harvest to inspect for and remove foreign objects such as glass, metal, rocks, or other dangerous/toxic items.	5				
2-13	Harvesting containers, totes, etc. are not used for carrying or storing non- produce items during the harvest season, and farm workers are instructed in this policy.	5				D
2-14	Water applied to harvested product is potable.	10				D
2-15	Efforts have been made to remove excessive dirt and mud from product and/or containers during harvest.	5				
2-16	Transportation equipment used to move product from field to storage areas or storage areas to processing plant which comes into contact with product is clean and in good repair.	10				D
2-17	There is a policy in place and has been implemented that harvested product being moved from field to storage areas or processing plants are covered.	5				D

COMMENTS:

COMMENTS CONTINUED:

Total points earned Part 2 _____

Total possible = 130 **Less Justified "N/A" _____**

Adjusted Total **_____** **Passing Score _____**
X .8 (80%) USDA

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Part 3 - HOUSE PACKING FACILITY

Receiving

Questions		Points	YES	NO	N/A	Doc
3-1	Product being moved to staging area prior to packing or processing shall be protected from possible contamination.	5				
3-2	Prior to packing, product is properly stored and/or handled in order to reduce possible contamination.	5				

Washing/Packing Line

Questions		Points	YES	NO	N/A	Doc
3-3	Source water used in the packing operation is potable.	10				D
3-4	If applicable, the temperature of processing water used in dump tanks, flumes, etc., is monitored and is kept at temperatures appropriate for the commodity.	10				D
3-5	Processing water is sufficiently treated to reduce microbial contamination.	10				D
3-6	Water-contact surfaces, such as dump tanks, flumes, wash tanks and hydro coolers, are cleaned and/or sanitized on a scheduled basis.	10				D
3-7	Water treatment (strength levels and pH) and exposure time is monitored and is appropriate for product.	10				D
3-8	Food contact surfaces are clean and in good condition.	10				
3-9	Product flow zones are protected from sources of contamination.	10				
3-10	The water used for cooling/ice is potable.	10				D
3-11	Manufacturing, storage and transportation facilities used in making and delivering ice used for cooling the product are sanitized on a scheduled basis.	10				D
3-12	Any ice used for cooling produce is manufactured, transported and stored under sanitary conditions.	10				D

Packing House Worker Sanitation

Questions		Points	YES	NO	N/A	Doc
3-13	Employee facilities (locker rooms, lunch and break areas, etc.) are clean and located away from packing area.	10				
3-14	Employees and visitors follow a written policy regarding the use of hair nets/beard nets in the production area.	5				D
3-15	Employees and visitors follow a written policy regarding the wearing of jewelry in the production area.	5				D

Packinghouse General Housekeeping

Questions		Points	YES	NO	N/A	Doc
3-16	Only food grade approved and labeled lubricants are used in the packing equipment/machinery.	10				D
3-17	Chemicals not approved for use on product are stored and segregated away from packing area.	10				
3-18	The plant grounds are reasonably free of litter and debris.	5				
3-19	The plant grounds are reasonably free of standing water.	5				
3-20	Outside garbage receptacles/dumpsters are closed or are located away from packing facility entrances and the area around such sites is reasonably clean.	5				
3-21	Packing facilities are enclosed.	5				
3-22	The packing facility interior is clean and maintained in an orderly manner.	5				
3-23	Floor drains appear to be free of obstructions.	5				
3-24	Pipes, ducts, fans and ceilings which are over food handling operations are clean.	5				
3-25	Glass materials above product flow zones are contained in case of breakage.	10				
3-26	Possible wastewater spillage is prevented from contaminating any food handling area by barriers, drains or a sufficient distance.	10				
3-27	Measures are taken to exclude animals or pests from packing and storage facilities.	10				

	Questions	Points	YES	NO	N/A	Doc
3-28	There is an established pest/rodent control program for the facility.	10				D
3-29	Service reports for the pest/rodent control program are available for review.	5				D
3-30	Interior walls, floors and ceilings are well maintained and are free of major cracks and crevices.	5				
3-31	There is a policy describing procedures which specify handling/disposition of finished product which is opened, spilled or comes into contact with the floor.	15				D

COMMENTS:

Total points earned Part 3 _____

Total possible = 250 **Less Justified "N/A" _____**

Adjusted Total **_____** **Passing Score _____**
X .8 (80%) USDA

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Part 4 – STORAGE AND TRANSPORTATION

Product, Containers & Pallets

Questions		Points	YES	NO	N/A	Doc
4-1	Packing containers are properly stored and sufficiently sealed to be protected from contamination (birds, rodents and other pests, etc.).	10				
4-2	Pallets, pallet boxes, totes, bags, bins, cellars, storage rooms, etc., are clean and in good condition and do not contribute foreign material to the product.	5				
4-3	Product stored outdoors in totes, trucks, bins, other containers or in bulk on the ground is covered and protected from contamination.	10				
4-4	Storage facilities/areas are inspected for foreign material prior to loading with product. Records are maintained.	5				D
4-5	Storage rooms, buildings, and/or facilities are maintained and sufficiently sealed or isolated to be protected from external contamination.	10				
4-6	Non-food grade substances such as paints, lubricants, pesticides, etc., are not stored in close proximity to the product.	10				
4-7	Mechanical equipment used during the storage process is clean and maintained to prevent contamination of the product.	5				

Pest Control

Questions		Points	YES	NO	N/A	Doc
4-8	Measures are taken to exclude animals or pests from storage facilities.	10				
4-9	There is an established pest control program for the facility.	10				D
4-10	Service reports for the pest control program are available for review.	5				D
4-11	Interior walls, floors and ceilings are well maintained and are free of major cracks and crevices.	5				

Ice

Questions		Points	YES	NO	N/A	Doc
4-12	The water used for cooling/ice is potable.	10				D
4-13	Manufacturing, storage and transportation facilities used in making and delivering ice used for cooling the product have been sanitized.	10				D

Storage/Temperature Control

Questions		Points	YES	NO	N/A	Doc
4-14	The storage facility is clean and maintained in an orderly manner.	5				
4-15	Refrigeration system is working properly.	5				
4-16	Storage temperature logs are maintained.	5				D
4-17	Thermometer(s) are checked for accuracy and records are available.	5				D

Transportation/Loading

Questions		Points	YES	NO	N/A	Doc
4-18	Prior to the loading process, conveyances (trailers) are required to be clean, in good physical condition, free from disagreeable odors, from obvious dirt and/or debris and capable of maintaining specified temperature.	10				D
4-19	Produce items are not loaded with potentially contaminating products.	5				D
4-20	Proper transportation temperatures are required and printed on manifests in order to ensure the quality and safety of product.	10				D
4-21	Trucks and transportation conveyances are loaded so minimal damage to product is caused.	5				D

COMMENTS:

COMMENTS CONTINUED:

Total Points Part 4 _____

Total possible = 155 **Less Justified "N/A" _____**

Adjusted Total _____ **Passing Score _____**
X .8 (80%) USDA

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Part 5 - Traceback

Traceback

Questions		Points	YES	NO	N/A	Doc
5-1	A documented traceback program has been established.	10				D
5-2	Finished product is traceable to the packinghouse.	10				
5-3	Finished product is traceable to a group of growers.	10				
5-4	Finished product is traceable to the specific grower.	10				
5-5	Finished product is traceable to a group of orchards or fields.	10				
5-6	Finished product is traceable to the specific orchard or field.	10				
5-7	Finished product is traceable to a group of harvest dates.	10				
5-8	Finished product is traceable to a specific harvest date.	10				
5-9	Finished product is identified with a packing date.	10				
5-10	The operation has performed a "mock recall" that was proven to be effective.	10				D

COMMENTS:

Total Points Part 5 _____

Total possible = **100** **Less Justified "N/A"** _____

Adjusted Total _____ **Passing Score** _____
X .8 (80%) USDA

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Part 6 – Wholesale Distribution Center/Terminal Warehouses

Receiving

Questions		Points	Yes	NO	N/A	Doc
6-1	All companies that supply fresh produce are required to have passed a third party audit verification of GAP and/or GHP.	5				D
6-2	Conveyances are required to be clean, in good physical condition and free from obvious objectionable odors, dirt and/or debris at time of unloading.	10				D
6-3	Company does not accept produce items that are loaded with or not protected from potentially contaminating products.	5				D
6-4	Refrigerated commodities are monitored for temperatures at time of receiving.	5				D

Storage Facility/Temperature Control

Questions		Points	YES	NO	N/A	Doc
6-5	The facility is clean and maintained in an orderly manner.	5				
6-6	Employee facilities (locker rooms, lunch and break areas, etc.) are clean and located away from storage and repacking/reconditioning area.	10				
6-7	Refrigerated rooms are monitored for temperature and logs are maintained.	5				D
6-8	Thermometer(s) are checked for accuracy and records are available.	5				D
6-9	Refrigeration system condensation does not come in contact with produce.	5				
6-10	Refrigeration equipment (condensers, fans, etc.) is cleaned on a scheduled basis.	10				D
6-11	Iced product does not drip on pallets of produce stored below.	10				
6-12	The water used for cooling/ice is potable.	10				D
6-13	Manufacturing, storage and transportation facilities used in making and delivering ice used for cooling the product have been sanitized on a scheduled basis.	10				D
6-14	A policy has been established to recondition or dispose of product which has come in contact with the floor or other potentially contaminating surfaces.	15				D

	Questions	Points	YES	NO	N/A	Doc
6-15	Product flow zones are protected from sources of contamination.	10				
6-16	Glass materials above product flow zones are contained in case of breakage.	10				
6-17	The grounds are reasonably free of litter and debris.	5				
6-18	The grounds are reasonably free of standing water.	5				
6-19	Outside garbage receptacles/dumpsters are closed or are located away from facility entrances and the area around such sites is reasonably clean.	5				
6-20	The facility is enclosed.	5				
6-21	Floor drains appear to be free of obstructions.	5				
6-22	Pipes, ducts, fans and ceilings in the facility are reasonably clean.	5				
6-23	Possible wastewater spillage is prevented from contaminating any food storage or handling area by barriers, drains or a sufficient distance.	10				

Pest Control

	Questions	Points	YES	NO	N/A	Doc
6-24	Measures are taken to exclude animals or pests from the facility.	10				
6-25	There is an established pest control program for the facility.	10				D
6-26	Service reports for the pest control program are available for review.	5				D
6-27	Interior walls, floors and ceilings are well maintained and free of major cracks and crevices.	5				

Repacking/Reconditioning

(6-28) Does the facility repack and/or recondition product? YES NO (circle one)

If the answer to question 6-28 is YES, answer questions 6-29 through 6-43. If the answer is NO, then questions 6-29 through 6-43 are answered N/A, and skip to question 6-44.

	Questions	Points	YES	NO	N/A	Doc
6-29	Repacking/Reconditioning processes are confined to an established location in the facility.	5				

	Questions	Points	YES	NO	N/A	Doc
6-30	Food contact surfaces are in good condition; cleaned and/or sanitized prior to use and cleaning logs are maintained.	15				D
6-31	Produce is washed before being repacked.	5				
6-32	Source water used in the repacking operation is potable.	10				D
6-33	Processing water is sufficiently treated to reduce microbial contamination of the product.	10				D
6-34	Water treatment (strength levels and pH) and exposure time is monitored and is appropriate for product.	10				D
6-35	Any ice used for cooling produce is manufactured, transported and stored under sanitary conditions.	10				D
6-36	Water used for chilling and/or to make ice is potable.	10				D
6-37	Only food grade approved and labeled lubricants are used in the repacking equipment/machinery.	10				D
6-38	Chemicals not approved for use on product are stored and segregated away from repacking area.	10				
6-39	Only new containers are used for product repacking.	10				
6-40	Pallets and other containers are clean and in good condition.	5				
6-41	Employees and visitors are required to follow a written policy regarding the use of hair nets/ beard nets.	5				D
6-42	Employees and visitors follow a written policy regarding the wearing of jewelry.	5				D
6-43	Packing containers are properly stored and protected from contamination (birds, rodents, and other pests, etc.)	10				

Shipping/Transportation

	Questions	Points	YES	NO	N/A	Doc
6-44	Prior to loading, conveyances are required to be clean.	10				D
6-45	Produce items are not loaded with potentially contaminating products.	10				D
6-46	Company has a written policy for the transporters to maintain appropriate temperatures during transit.	5				D

COMMENTS:

Total Points Part 6 _____

Total possible = **355** **Less Justified "N/A"** _____

Adjusted Total _____ **Passing Score** _____
X .8 (80%) USDA

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Part 6A Traceback for Wholesale Distribution Center/Terminal Warehouse

Questions		Points	YES	NO	N/A	Doc
6A-1	A documented traceback program has been established.	10				D
6A-2	Received product is traceable to the supplier.	10				
6A-3	Shipped product is traceable to the Wholesale Distribution Center/Terminal Warehouse facility from where it was shipped.	10				
6A-4	Product shipped is traceable to the repacker's shipping date.	10				
6A-5	Repacked product can be traced to original product identification.	10				
6A-6	The operation has performed a "mock recall" that was proven to be effective.	10				D

COMMENTS:

Total Points Part 6A _____

Total possible = 60 **Less Justified "N/A" _____**

Adjusted Total _____ **Passing Score _____**
X .8 (80%) USDA

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Part 7 – Preventive Food Defense Procedures

Based on the U.S. Food and Drug Administration's Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance for Industry.

Secure Employee/Visitor Procedures

Questions		Points	YES	NO	N/A	Doc
7-1	The company has documented food defense plan and a person has been designated to oversee it. Name:	5				D
7-2	Food defense training has been provided to all employees.	5				D
7-3	Employees are aware of whom in management they should contact about potential security problems/issues.	5				
7-4	Visitors are required to check in (showing proof of identity) and out, when entering/leaving the facility.	5				D
7-5	The purpose of visitation to site is verified before admittance to the facility.	5				D
7-6	Visitors are prohibited from the packing/storage areas unless accompanied by an employee.	5				D
7-7	Incoming and outgoing employee and visitor vehicles to and from the site are subject to inspection.	5				D
7-8	Parked vehicles belonging to employees and visitors display a decal or placard issued by the facility.	5				
7-9	Staff is prohibited from bringing personal items into the handling or storage areas.	5				D
7-10	Staff access in facility is limited to the area of their job function and unrestricted areas.	5				D
7-11	Management is aware of which employee should be on the premises, and the area they are assigned to.	5				D
7-12	A system of positive identification of employees has been established and is enforced.	5				

Secure Facility Procedures

Questions		Points	YES	NO	N/A	Doc
7-13	Uniforms, name tags, or identification badges are collected from employees prior to the termination of employment.	5				D
7-14	The mailroom is located away from the packing/storage facilities.	5				
7-15	Computer access is restricted to specific personnel.	5				D
7-16	A system of traceability of computer transactions has been established.	5				D
7-17	A minimum level of background checks has been established for all employees.	5				D
7-18	Routine security checks of the premises are performed for signs of tampering, criminal or terrorist action.	5				
7-19	Perimeter of facility is secured by fencing or other deterrent.	5				
7-20	Checklists are used to verify the security of doors, windows, and other points of entry.	5				D
7-21	All keys to the establishment are accounted for.	5				D
7-22	The facility has an emergency lighting system.	5				
7-23	The facility is enclosed.	5				
7-24	Storage or vehicles/containers/trailers/railcars that are not being used are kept locked.	5				D
7-25	Delivery schedules have been established.	5				
7-26	The off-loading of incoming materials is supervised.	5				
7-27	The organization has an established policy for rejecting deliveries.	5				D
7-28	Unauthorized deliveries are not accepted.	5				D
7-29	The company does not accept returned (empty) containers for packing of product unless they are sanitized containers intended for reuse.	5				D
7-30	The facility has a program in place to inspect product returned to the facility for tampering.	5				D
7-31	The company has identified the individual(s), with at least one backup, who are responsible for recalling the product.	5				D
7-32	The company has performed a “mock recall” that was proven to be effective.	5				D

	Questions	Points	YES	NO	N/A	Doc
7-33	Product imported from outside the United States is segregated from domestic product.	5				D
7-34	Allergens handled by the facility are segregated from products to avoid cross contamination.	5				D
7-35	Floor plans, product flow plans, and/or segregation charts are in a secure location.	5				
7-36	The organization has registered with the FDA and has been issued a registration number (do not record the number on checklist).	5				D

COMMENTS:

COMMENTS CONTINUED:

Total Points Part 7_____

Total possible = **180** **Less Justified "N/A" _____**

Adjusted Total **_____** **Passing Score _____**
X .8 (80%) USDA

For further information regarding the USDA GAP & GHP Program Please contact:

USDA Fruit and Vegetable Programs, Fresh Products Branch, Field Operations Section at 800-811-2373

		BMP Self Assessment Worksheet				
Page						
		Section 1. Pesticide Management		Current Adoption		Future Adoption
201	293	**1. Integrated Pest Management**	**Y**	**N**	**N/A**	**Year**
		IPM practices are utilized (soil preparation, crop rotation, resistant varieties, modified irrigation methods, cover crops, augmenting beneficial insects, etc.).				
		Scouting is used to monitor pest populations in order to decide when control measures are needed.				
		Varieties are selected based on factors such as maturity, lodging resistance, climate, market value, yield potential, and pest resistance.				
		Spray/dust drift to other crops and off-site areas is minimized.				
		Classes of insecticide and fungicide are alternated to prevent resistance buildup.				
		Accurate records are maintained.				
		Pesticide applications are coordinated with soil moisture, weather forecast, and irrigation.				
36	70	**2. Pesticide Mixing/loading**				
		Mix and load operations are conducted at locations away from ground water wells and surface water bodies (or berms are used to keep spills out of surface waters if such areas cannot be avoided).				
		Properly constructed and maintained permanent or portable mix/load facilities are used (or mixing and loading operations are conducted at random locations in the field).				
		Nurse tanks are used to transport clean water to the field in order to fill the sprayer.				
		A check valve or air gap separation is ALWAYS used to prevent backflow into the water source.				
		Adequate headspace (usually 10%) is left when filling the tank.				
		3. Spill Clean-up				
		Appropriate PPEs as indicated on the MSDS or label are ALWAYS used when handling pesticides.				
		Pesticide spills are properly contained and cleaned up.				
		Employees receive periodic spill response training.				
		4. Pesticide Application Equipment Wash water and Container Management				
		Required PPEs are ALWAYS worn when conducting rinse operations.				
		Empty containers are pressure-rinsed or triple-rinsed and the rinse water is added to the sprayer.				
		Pesticide containers are properly disposed or recycled after cleaning.				
		All application equipment is washed on a mixing/loading pad or at random areas in the field.				
		5. Pesticide Equipment Calibration				
		Equipment is calibrated at appropriate intervals based on use, on spray coverage, and nozzle replacement.				
		The flow rates of all nozzles on the sprayer are checked.				
68	200	**6. Worker Protection Standards**				

		Information is available at a central location(WPS safety poster, labels, MSDS,emergency information).				
		Pesticide safety training for workers is conducted and documented.				
		Decontamination supplies (water, soap, towels, etc) and emergency assistance (transportation and information) is available				
		Restrictions during applications and restricted-entry intervals (limitations on early entry).				
		Notices about applications (oral and treated area posting).				
13	20	**Section 2 Conservation Practices and Buffers**				
		1. Wellhead protection				
		Wells are sited as far as possible from septic tanks or chemical mixing areas.				
		Abandoned or flowing wells are properly plugged or valved.				
		Backflow prevention devices are used when fertigating or chemigating.				
		Wellheads and pads are inspected regularly for leaks or cracks and if needed, repairs are made promptly.				
		No agrichemicals in the well house and no mixing within 100 ft of any well.				
		2 Wetland Protection and Impact Avoidance				
		Wetlands (>1ac=35 ft wide, 1/2-1 ac=50 ft wide) and perennial watercourses (i.e., creeks, rivers, min 25 ft buffer) have appropriate undisturbed upland buffers.				
		The use of pesticides and fertilizers around wetlands is limited and spray drift into wetlands is minimal.				
		3 Grassed Waterways				
		The bottom and side slopes of grassed waterways are maintained to preserve their function and integrity.				
		Side slopes are not be steeper than 2:1, and are be designed to accommodate equipment crossing.				
		Tillage equipment is lifted and sprayers are shut off when crossing waterways.				
		4 Filter Strips				
		Filter strip vegetation is suited to the climate and soil types of the area.				
		Heavy equipment use and grazing are avoided when filter strips are saturated.				
		Invasive plant species are controlled.				
		Rills or gullies that have formed have been repaired.				
		5 Field Borders				
		Field borders of permanent vegetation are established, maintained, and are wide enough so equipment can turn around.				
		Waterbars or berms are used (if needed) to break up or redirect concentrated water flow within the borders.				
		6 Riparian Buffers				
		Riparian buffers are used adjacent to natural water bodies (50+ ft wide).				
		The riparian buffer is maintained, dead trees or shrubs removed and replaced, and undesirable vegetation is controlled.				

6	12	**7. Contour Farming**				
		Row direction is established as closely as possible to the natural contour (most effective when slopes are between 2 and 10 percent).				
		The established contour line is followed for all tillage and planting operations.				
		Farming operations begin on the contour baselines and proceed both up and down the slope in a parallel pattern until patterns meet.				
		Sod turn strips are established on sharp ridge points or other areas, as needed, where contour row curvature becomes too sharp to keep machinery aligned with rows during field operations.				
		8. Land Leveling				
		The design and layout for leveling land is based on a detailed engineering survey, design and layout.				
		Leveling operations are conducted in such a manner to minimize erosion.				
		Exposed areas of highly permeable soils (that can inhibit proper distribution of water over the field) are not left after leveling work is finished.				
		19. Soil Survey				
		Grower is familiar with the basic characteristics of each soil series that is identified on the property.				
		The information from the soil survey is used to help make farm-management decisions related to irrigation, fertilization, erosion control, etc.				
		Section 3. Erosion Control and Sediment Management				
		1. Sediment Basins				
		Sediment basins constructed upstream of control structures are used to trap sediment and debris in runoff water.				
		Accumulated sediment is removed before it significantly reduces the capacity of the basin.				
		2. Access Roads				
		Road widths are consistent with the type and size of vehicles.				
		Vegetative cover on road banks is maintained.				

		Stabilize soils with vegetation or armor around the ends of pipes to prevent erosion when crossing conveyance systems.				
		Access roads are sloped towards field production areas.				
		3. Critical Area Planting				
		Highly erodible areas are stabilized by well-maintained vegetation.				
		Plants are non-invasive species that are suited to the soil and climate.				
		4. Diversions/Terraces				
		Diversions or terraces are used where appropriate to divert runoff water away from cropland.				
		5. Temporary Erosion Control Measures				
		Temporary erosion control measures (e.g. straw bale barrier, silt fence erosion-control blankets, gabions, and floating turbidity barriers) are used to minimize sediment transport from disturbed areas.				
		6. Raised Bed Preparation				
		Old crop residues are plowed down well in advance of crop establishment.				
		Bed height is determined by the amount of drainage needed in the field (excessively high beds are prone to rapid drying and can be difficult to re-wet).				
		Drip tube is appropriately located considering the soils, bed geometry, and crop.				
		Fertilizer rates and placement are appropriate so that leaching is minimized.				
		Plastic mulch is properly removed and recycled or legally disposed.				
		7. Grade Stabilization Structures				
		Stabilization structures are used and maintained in areas that are prone to erosion due to changes in flow velocity or water level.				
		8. Ditch Construction and Maintenance				
		Ditches are set back appropriate distances from wetlands.				
		Ditch spacings, depths, and side-slopes are consistent with soil types.				
		Ditches are cleaned when necessary and vegetation is maintained on side slopes.				
		Accumulated aquatic weeds are routinely removed.				
6	12	**9. Conservation Tillage**				
		Where appropriate, conservation tillage (no-till, strip-till, ridge-till, mulch till, and seasonal-till) are used to reduce soil erosion.				
		10. Cover Crops				
		A cover crop that is suitable for the climate, soil type, cropping system, and specific goals (i.e., nutrient uptake, nitrogen fixation, etc.) is used to protect the land from erosion until the main crop is planted.				
		11. Conservation Crop Rotation				
		Crops are adapted to the local climate and soil conditions and grown in a planned, recurring sequence.				

		Alternate crops to break the pest cycle and/or allow the use of a variety of IPM strategies.				
21	32	**Section 4. Nutrient and Irrigation Management**				
		1. Soil Testing/Soil pH				
		Soil pH is tested regularly and if needed, amendments are used to maintain soil pH between 6.0 and 6.5 for most crops.				
		2. Water Table Observation Wells				
		Water table observation wells are used to monitor water table levels as a tool to aid irrigation and drainage decisions.				
		3. Precision Agriculture				
		Precision application technology is used where appropriate to apply site-specific inputs (fertilizer, seed, pesticides, etc.) in order to minimize potential for leaching and runoff of applied materials.				
		4. Crop Establishment				
		Weather forecasts and season are considered when planning for crop establishment.				
		Soil moisture measurement devices (such as tensiometers) and/or water table observation wells are used so that over-watering of fields is minimized.				
		5. Double Cropping in Plasticulture Systems				
		Soil samples are used to determine residual fertilizer available from first crop and rates for the second crop are adjusted accordingly.				
		Soil moisture is maintained at appropriate levels between removal of the first crop and planting of the second crop.				
34	36	**6. Proper Use of Organic Fertilizer Materials**				
		Where and when appropriate, organic nutrient fertilizer sources are utilized.				
		Application rates are based on laboratory analysis of product and on individual crop requirements.				
		Fertilizer spreaders are calibrated and excessive material is not applied.				
		Uncomposted animal manure is not spread on cropland.				
		7. Controlled-release Fertilizer				
		Controlled-release fertilizers are applied at lower rates than that recommended rate for soluble fertilizers.				
		The CRF's release time is matched with the crop nutrient needs.				
		Do not exceed the recommended fertilization rate.				
		8. Optimum Fertilization Management/Application				
		NEVBGA published fertilizer recommendations are used (which include provisions for supplemental nutrient applications) or alternate recommendations that are supported by other credible research institutions are used.				
		Fertilizer application equipment is calibrated accurately and fertilizer is applied at the appropriate rate and position with respect to the plant's root zone.				
		A calibrated micronutrient soil test id conducted every to 2 to 3 years. Micronutrients are applied only when a specific deficiency has been clearly diagnosed.				

		A calibrated soil test is used to determine P fertilizer needs. Required P is applied P to the root zone.				
		When using drip irrigation, no more than 20-40% of the N and K is applied as a cold mix in the bed.				
		Where possible, applications of the mobile nutrients are split to reduce leaching losses.				
		Supplemental fertilizer applications after leaching rainfall events is limited to less than 30 lbs. N per acre and 20 lbs K_20 per acre				
		Plant tissue analysis or sap tests that fall below the sufficiency ranges are used as a basis for supplemental fertilizer applications.				
20		**9. Chemigation/Fertigation**				
		Design the system to maximize irrigation uniformity and use the appropriate backflow prevention devices.				
		When the production system permits, chemigation and fertigation is utilized to apply frequent, low rates of fertilizers and agrichemicals to the crop via irrigation.				
		When chemigating, over-irrigation resulting in chemical leaching is avoided.				
		Materials are injected only after the irrigation system is brought up to full pressure and the system is operated long enough after completion of injection to flush system.				
		Split applications are used when the required injection period would result in water and fertilizer moving below the plant root zone.				
		All chemicals applied through the irrigation system are appropriately labeled for chemigation use.				
		10. Tissue Testing				
		Use a fresh, representative leaf sample and sample the most recently, fully mature leaf				
		Tissue sampling is used regularly to diagnose plant nutrient status and fertilizer applications are adjusted according to results.				
340	343	**11. Water Supply**				
		Seepage losses on reservoir-supplied sources are reduced by lining dikes with appropriate materials or construction techniques.				
		Backflow devices are used to ensure that the water source does not become contaminated from chemigation activities.				
		12. Tailwater Recovery				
		Where appropriate, tailwater recovery systems are used to collect and re-use irrigation water or rainfall that runs off cropped areas.				
13	20	**13. Irrigation System Maintenance and Evaluation**				
		Irrigation system uniformity is periodically checked.				
		Flow meters and pressure gauges are used to determine existing operating parameters and to properly manage the irrigation system.				
		Irrigation water quality is tested at least once each year.				
		Manufacturers maintenance recommendations are followed for pumps, filters, valves, injection equipment, etc.				
		14. Irrigation Scheduling				
		Soil moisture content is measured and used to determine effectiveness of irrigation schedules.				

		Irrigation schedules are adjusted for time of year, plant size, and soil moisture status. (Irrigation application may need to be split into 2 or 3 daily applications).				
		Irrigation and fertilization are managed together, especially if liquid fertilizer is being applied through the irrigation system.				
		Excess irrigations are avoided.				
15	20	**Section 5. Water Resources Management**				
		1. Flood Protection				
		A water management/drainage plan has been developed to deal with potential flooding resulting from high rainfall events (e.g. tropical storms or hurricanes).				
		2. Ponds/Reservoirs and Ditches				
		Detention ponds/reservoirs are used to capture and temporarily store stormwater runoff.				
		Culverts are maintained free of debris.				
		Sediment sumps are used and maintained in ditches at pump stations and where the velocity of the water creates erosion problems.				
		Vegetative cover on dikes and berms is mowed and properly maintained.				
		3. Farm Pond				
		Vegetative cover of farm ponds (used for irrigation water supply and/or for holding and treating runoff water) is maintained by mowing or burning and nuisance or exotic species are controlled.				
		4. Fields and Beds				
		Soil type, field slope, and crop characteristics are considered when laying out rows with regard to length and alignment.				
		If plastic mulch is used, consider using drip irrigation.				
		Fields with persistent drainage problems are leveled or re-graded to improve stormwater management.				
		5. Plasticulture Farming				
		Depressional areas are utilized as catchment areas.				
		Tillage practices are appropriate to minimize the development of plow pans.				
		Where practical, inter-row cover crops such as grasses or legumes are used to reduce runoff.				
		Plastic mulch is not left on farm fields unduly long after harvest.				
		Undesirable weed species growing in holes in the polyethylene mulch are controlled.				
		6. Springs Protection				
		Conservation buffer setbacks are established and maintained for springs, spring runs, functional sinks, or other conduits.				

		Section 6. Waste Management				
296	298	**1. Organic Waste**				
		All State and local regulations are followed in composting. Only acceptable materials are used.				
		Composting operations are sited and operated so as to limit offensive odors and dust. Piles are not allowed to become anaerobic.				
		Proper pile structure, turning, temperatures, moisture adjustments, C:N ratios, and curing procedures are followed.				
		Compost piles are protected from surface water, rain, and storm water runoff.				
		Finished compost should be tested for major characteristics.				
299		**2. Inorganic Waste**				
		Unused pesticides and pesticide containers are hazardous waste. Dispose of at state or local hazardous waste collection events.				
		Agricultural plastic cannot be burned. Contact a plastic recycling company or commercial waste hauler.				
300	343	**Section 7a: Good Agricultural Practices: Field and Greenhouse**				
		Fields should not receive runoff or drift from animal operations. Domestic animals and livestock are excluded from production fields.				
		Wildlife should be excluded to the extent possible.				
		Debris and cull piles that attract pests are eliminated.				
		Only properly composted manure is applied. Manure is incorporated into soil.				
		Irrigation water is free of contamination by human or animal feces and meets standards for recreational use.				
		All OSHA and FDA standards for field sanitary facilities are met.				
		A worker training program on hygiene and hand washing is present.				
		A policy for reassigning ill workers to non food contact jobs is in place.				
		Section 7b. Good Agricultural Practices: Harvest				
		All harvest containers and food contact surfaces are clean and sanitized before use.				
		All water used in harvest operations is potable.				
		Dirt, debris, and injured produce are removed in the field.				
		Workers are trained in microbial food safety risk reduction.				
		Equipment left in fields is protected from vector contamination.				
		Records of water usage, worker training, production practices, and environmental review are kept.				

		Section 7c. Good Agricultural Practices: Packing and Transportation				
		A routine cleaning and sanitizing procedure for all food contact surfaces is employed.				
		Only potable water is used in dump tank, flume, and in cleaning, grading, or cooling areas. Monitor the quality of water in all operations.				
		All injured or damaged produce is eliminated.				
		Birds and other vectors are prevented from contaminating packing area, equipment surfaces, and storage areas.				
		A pest control program is in place.				
		Animals are excluded from packing facility.				
		Antimicrobial chemicals are used in washing. The levels of antimicrobial chemicals is monitored and recorded.				
		Toilets and sanitary facilities are provided and maintained in a clean and sanitary way.				
		Hand washing is required after toilet use				
		Ice is made from potable water. Ice making facility is clean and sanitary.				
		Trucks are inspected for dirt, debris, and contamination from previous loads. Clean outs are requested when necessary.				
		Positive lot identification and traceback systems are present.				
		Proper records are kept for three years.				

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