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Good Agricultural Practices (GAP): Certification Basics

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Good Agricultural Practices (GAP), which includes Good Handling Practices (GHP), was formally implemented by the United States Department of Agriculture and Food and Drug Administration in 2002. It is a voluntary audit program designed for the fruit and vegetable production industry to verify that the produce is grown, packed, handled, and stored as safely as possible. These audits check for adherence to the FDA's production guide (Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables) as well as recognized industry food safety practices. Although these audits are voluntary, many buyers, wholesale organizations, grocery chains and risk-adverse institutions such as schools and hospitals are beginning to independently require growers to be GAP certified.

Food safety should be an extremely important issue for fruit and vegetable producers and be taken seriously by them. Foodborne illnesses and deaths have been highly publicized over recent years. The loss of consumer confidence over these contamination outbreaks has serious effects on the industry. Almost without exception, the price of the affected crop drops following an outbreak, resulting in significant economic losses. The GAP program is a good way for growers to regain and maintain consumer trust and prevent contamination.

Before starting on the GAP certification process, check with your buyer(s) and see if they have a preference for a certain type of audit. There are different types of GAP audits such as harmonized GAP, Global GAP, and GroupGAP. Different audit protocols may have different requirements. For example, Global GAP requires that produce be tested for pesticide residues. GAP audits can be conducted by USDA, some state departments of agriculture, and private companies (see Appendix). Currently, some buyers will only accept a GAP certification from a private certifier, so ensuring that you pursue certification that is accepted by your buyers is absolutely critical.

Once you have selected an audit protocol and a certifying agency, then start to develop your food safety policies and procedures, employee training, and record keeping. Check with your certifying agency for their specific forms and requirements. Understand that the needed employee training and recordkeeping to successfully pass a GAP audit is significant. You will need to plan time for training sessions, additional paperwork, and other GAP related activities. The USDA's GAP-GHP Checklist provides an outline of documentation that is needed. Different audit protocols and different certifying agencies may have slightly different record keeping

requirements. Some audit protocols may require testing of soil, manure, wash water, irrigation water, and produce. Be aware of these requirements so the testing can be done at the proper time. Check with the certifying agency you have selected because they may have a preference or requirement that you use certain testing labs.

Most GAP audits are completed at harvest time but the record keeping begins with worker training, site selection, planting, pesticide use, irrigation, etc. Develop appropriate policies and procedures to meet different requirements and then document that procedures were followed and employees were trained.

USDA GAP audits begin with some general questions about the implementation of the food-safety program. Additionally, there are seven parts/areas that can be audited. The grower can choose to be audited on all seven or just one of the parts. No matter how many parts are chosen to be audited, the section of general questions must always be completed. The number of areas to be audited is typically dictated by the operations goals or the requirements of the buyers. Growers can also choose which products they will have audited. The seven parts are as follows 1) farm review; 2) field harvest and field packing activities; 3) house packing facilities; 4) storage and transportation; 5) no longer used; 6) wholesale distribution center/terminal warehouse; and 7) preventative food-defense procedures. A GAP audit consists of parts 1 and 2 and a GHP audit includes parts 3, 4 and 6. Part 7 is an optional area for operations that need to verify food defense. This bulletin includes an overview of preparing for your audit, the general questions section, and an introduction to each of the GAP portions of the audit (along with simple examples).

Preparing for Your GAP Audit

Timing. Identify the best times to schedule an audit. Try to time the audit to get the most out of the 12 months that the certificate is valid. In general, it is best to schedule the audit so that the auditor comes when you are harvesting the largest variety of crops. Be aware that if a second visit is deemed necessary, your certificate will not be valid until after that visit. Be sure to schedule your audit at least 2 weeks prior to your desired audit date.

Food Safety Plan. A food safety plan is typically reported as a compilation of documents, records and policies and should be implemented as early in the growing season as possible. This will allow time to make changes in the plan if needed as well as gather all of the necessary documents and records for the audit. A copy of the food safety plan must be submitted when applying for an auditor to come to your farm. For most farms, this takes form as a written document that details your growing and handling process as well as identifies areas of risks specific to your farm and how you address them. A well-written and thorough food safely plan can significantly ease and improve your GAP certification process. Written policies, procedures, and records make up most of the food safety manual.

Food Safety Officer. You will need to appoint a food safety officer; this can be the owner/operator, a co-operator or a member of the staff. The officer needs to be very familiar with the food safety practices and must be present when the auditor comes to the farm.

Paperwork. Having the correct documentation is critical for successfully completing a GAP audit. Proper paperwork can earn two-thirds of the points needed to pass an audit. Before scheduling an audit, make sure all your paperwork is in place and accurate. Since employees will

be interviewed, be sure to review all your safety policies and procedures with them. The best way to make sure you have all of the needed paperwork/documentation is to carefully go over the USDA's GAP-GHP Checklist.

There are three types of paperwork which document procedures and protocols associated with a farm food safety plan: records, policies, and documents. A record shows a process that has been completed or records an action that has taken place (i.e., activity logs, dates pesticides were applied). A policy is a written statement describing food safety procedures (i.e., hand-washing policy, sick day policy). A document may be a combination of policy and record or test result (i.e., employee signed policy after a training meeting, official water or soil tests).

Internal audit. It is a good idea to conduct an internal audit (a practice run) before scheduling an official audit in order to improve your chances of passing the audit on the first USDA visit. Typically, this can be done by your food safety officer. Since you must pay for each visit to the farm by the official auditor, doing everything possible to be sure you pass on the first visit will save you money and time. Again, be sure to carefully check the audit checklist and take any corrective actions needed.

USDA GAP Audit Costs. The cost of an audit averages around $1,000, although the distance the auditor has to travel to your farm will significantly affect the overall cost of your audit. This includes administrative fees, paperwork, auditor's travel time and time at your farm (currently $92/hour). If a follow-up visit is needed, the cost will be about the same as your initial audit. To reduce your payment for the auditors travel, consider teaming up with other farms nearby to consolidate the auditor's trip into one. The cost of travel will then be divided among the participating farms.

Group GAP. Starting in April, 2016, a new option called GroupGAP will be available that will open up the possibility of GAP certification to small and mid-scale producers by having many growers collaborate. In GroupGAP, independent farms will organize under a central entity (food hub, grower co-op, etc.) and create a common food safety plan that can be audited as a group rather than individually. In GroupGAP, independent farms come together to organize a food safety system tailored to their buyers. Together, the farms prepare for an audit by sharing resources and certification costs. Although the focus of GroupGAP is on GAP certification for smaller growers, the program can be applied to all growers regardless of size or market. Participants will need to collectively create a Quality Management System (QMS) that addresses the group's organization structure, policies, procedures and resources that will be used to implement a group certification process. GroupGAP certification has two layers of audits. First, internal audits conducted by the group's internal auditor and second, the formal GroupGAP certification audit conducted by the USDA. The formal audit focuses on the group as a whole and conducts farm-visit audits on a randomly selected percentage of the group. Answers for common questions about the GroupGAP program can be found at http://www.ams.usda.gov/sites/default/files/media/FAQs%20GroupGAP.PDF (USDA's GroupGAP Frequently Asked Questions).

What to Expect on Audit Day

Be prepared from the moment the auditor arrives and try to be as efficient as possible. With all documents readily available and the food safety officer on hand you will reduce the time the auditor spends at your farm, thereby reducing your overall audit cost. The auditor will confirm

which sections you requested to be audited and review your submitted food safety plan. You will need to provide a field map to assist the auditor in the farm tour. You can expect the auditor to interview employees at the farm as well as examine harvesting equipment, hygiene areas, and crop production areas. The auditor will score your farm on site and have a closing meeting with you to discuss the results. You will be scored using the audit checklist referenced above. Each question on the list can earn 0, 5, 10, or 15 points (no partial points are awarded). To pass, you must earn at least 80% of the available points.

Automatic Failure

One or more of the following issues can result in an automatic failure: product contamination, high presence of rodents or other pests in the production area, employee practices that threaten safety of produce, no food safety manual or food safety officer, or falsification of records.

These requirements, costs, and the additional time needed for becoming GAP certified can be quite intimidating. While the process can be frustrating, try to take each section one at a time and think of ways you can make this work for your operation. Growers who have successfully completed GAP certification report having increased confidence in how their operation can navigate a food safety problem and feel like their overall risk as a farmer is decreased.

General Questions

The general questions are mandatory for each audit, no matter which sections you decide to have audited. In order to successfully pass the GAP and GHP audit you must complete the general questions portion. The five parts are: the food safety plan, traceability, recall program, worker health and hygiene, and pesticide/chemical use. Examples of what is needed for each of these parts follow and all parts together compose an example Farm Safety Plan.

In order to get the most out of these examples, reference the GAP&GHP audit while reading them. Each section of the checklist has a code (i.e. P-1). These codes are included at the beginning of each sample section to allow for easy reference to the checklist.

EXAMPLE FARM INFORMATION

Farm Location: Logan, Utah

Legal Description/GPS/Lat-Long of Location: 41.7378° N, 111.8308° W

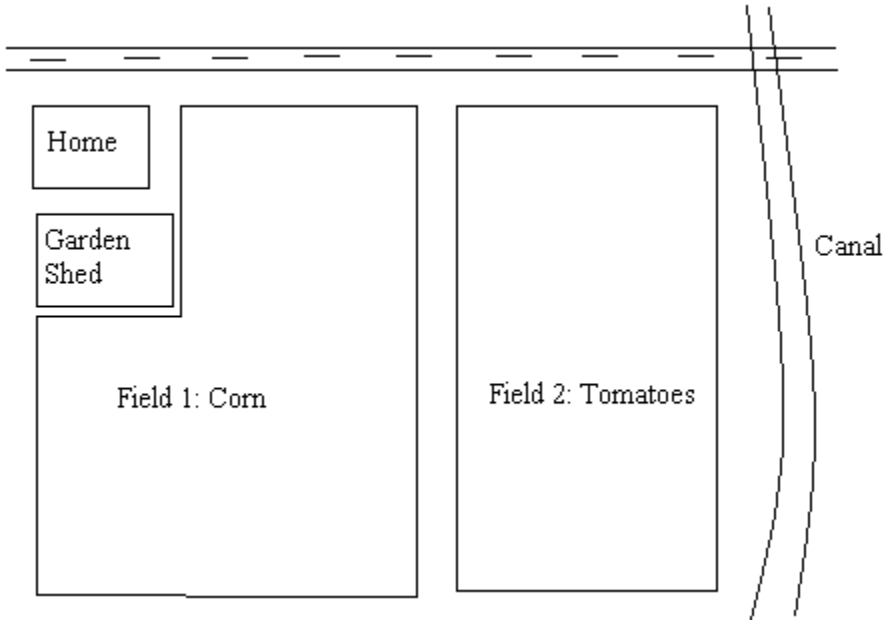
A legal description of your farm is included in your tax record.

Total Acres Farmed: 2 acres

Description of crops farmed

Crop	History	# of Acres
Sweet Corn	Mixed vegetable production for 8 years, converted from pasture.	1
Tomatoes	Mixed vegetable production for 8 years, converted from pasture.	1

Farm Map: This can be an aerial photo from Google maps with labels of each section of your farm added in, or a line drawn map with labels like the example below.



Notes

Agricultural Activities Description: We grow corn and tomatoes in two fields adjacent to our personal residence. Our water supply is secondary water. We sell our produce wholesale and use a shaded shed to hold the produce before pickup. Our family provides most of the labor with some local hired help during the busy times.

Food Safety Plan (P-1 through P-2)

Mission Statement: We are committed to growing, harvesting, and delivering high-quality, fresh produce that is free of contaminates that may lead to illness. We take precautions to ensure this is possible by requiring all employees attend food safety, hygiene, and sanitation training meetings and enforcing food safety policies.

Goal: We aim to meet our safety goals each day by maintaining checklists of farm policies and keeping up to date on needed procedures. Agricultural operations are conducted in such a way as to minimize negative effects on our farm, its products, and the environment.

Records: This Food Safety Plan is reviewed on an annual basis and updated as needed. We maintain all documentation for at least 2 years. Our goal is to implement the objectives outlined in the USDA "Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables" and meet the guidelines of the Good Agricultural Practices (GAP) audit.

Disciplinary Policy: If a worker does not exhibit proper food safety practices, he/she is verbally corrected and retrained if needed. In the event of repeated offenses, the worker will be dismissed.

Management

Food Safety Officer

Name/Position	Address
Ima Farmer/Owner	1212 Example Rd. Logan, UT
Phone Number	Email
(435) 555-1234	ima.farmer@example.com

Alternate Contact (Optional)

Name/Position	Address
Awesome Farmer/Co-owner	1212 Example Rd. Logan, UT
Phone Number	Email
(435) 555-4321	awesome.farmer@example.com

Notes

Traceability and Recall (G-1 through G-2, 1-26)

Each production area is clearly defined and coded to enable traceability in the event of a recall. Field 1 is represented as 01 and Field 2 as 02. Each day produce is harvested, we use the date to create a label for the produce as our identifier. For example, corn harvested from field 1 on July 21 of 2016 would be labeled: (01.07.21.16).

Including a picture of a lot tag may be helpful.

Each pick-up of produce will have a delivery form filled out. An example form follows.

Pick-up Form	
Farm Name	Example Farm
Pick-up Date	7/22/2016
Harvest Date	7/21/2016
Crop/Variety	Tomato/Sunbrite
Number of Units	20 Bushels
Lot Name	02.07.21.16
Harvester Name(s)	Ima, Awesome
Driver Name	Joe Driver

Notes:

Recall Program (Not required for first year of application)

A mock recall will be conducted annually. A mock recall was conducted on 08/01/2016 and was completed in 2.5 hours. This recall included emailing our wholesaler, explaining the mock recall and providing a sample lot number for them to locate for the mock recall. After they located the produce they emailed a confirmation copy of the tags/delivery documents associated with the product. We have outlined a plan of action for the contaminated produce below.

Be sure to include the email correspondence as documented proof of the mock recall.

Recall plan of action: In the event of a contamination, we will take immediate action to reduce the effects of the contamination. We will identify the problem and assess health risks. Next we will determine what products and lot numbers were involved. Next, we will determine where the affected inventory is located and notify our wholesaler or buyer of the problem and request all produce from the affected lot be located and pulled from the sale floor. Exact amounts of produce shipped will be specified and matched with the amount of produce disposed of. We will ask the wholesaler to dispose of the product and provide us with proof of disposal including the date, time, and method of disposal.

We have created a recall contact list with names and phone numbers of our buyers, our insurance company, and our legal counsel to speed the recall process.
After completion of the recall we outlined weaknesses in our plan and will be taking steps to improve it.

Be sure to create a customer/buyer contact list with names, phone numbers, and emails. For a CSA, this means all members' email and phone numbers. For a farmer's market or roadside stand this may be achieved by having an email sign-up sheet at the stand and by updating a company webpage with recall information.

Worker Health and Hygiene (G-3 through G-15)

(G-3) Potable water policy: Potable water is available to all employees for drinking, hand washing, and for harvesting activities. This water is available at our personal home and garden shed. An annual city water test is checked for safety and included below.
An emergency water source is available via bottled water.

> *Include annual city water report here for culinary water. If well water is used you will need to have it tested and include results here.*

(G-4) Employee and Visitor Hygiene policy: All employee's and visitors to the farm sign a log-in sheet and are informed of and required to follow proper sanitation and hygiene practices in the field.

Farm Visitor Policy and Log Sheet			
Date	Name	Company	Nature of Visit
6/10/2016	Curious Neighbor	--	Tour
6/21/2016	John Doe	--	Tour
7/24/2016	Joe Doe	--	Tour
7/26/2016	Dan Drost	USU	Crop production advice

Notes

(G-5) Sanitation and Hygiene Training Policy: All workers will be trained in proper sanitation and hygiene practices at the beginning of each season. (Note: Farm should have a written policy manual for the crew to review and then get the training) A signed log of training is below.

Sanitation and Hygiene Training Meeting

By signing below I certify that I have attended the sanitation and hygiene training on May 25, 2016 at Example Farm.	
Name	Signature
Ima Farmer	
Awesome Farmer	
Har D. Worker	
P. Ick Fast	
Sonny Farmer	

This training log can be used as a format to create many other training logs that may be useful for your farm such as: worker safety during lifting, proper tractor/equipment use, safety during chemical applications, proper hygiene, how to avoid heat stroke and other first aid training, farm policy training, proper harvesting and storage techniques, and emergency protocols. This list and the examples in this farm plan are not all-inclusive as training needs will vary from farm to farm.

Notes

(G-6 and G-7 are observations of the auditor on day of visit)

(G-8 is observation of auditor on day of visit) Signs instructing proper hand washing are posted in garden shed above sink.

When main bathroom facility is in the owner home a sign in the bathroom is not required. However, it must be somewhere else on the premises in a prominent location.

(G-9 is observation of auditor on day of visit)

Be sure to have all toilet/restroom/field sanitation facilities clean and fully stocked.

(**G-10) All restrooms will be regularly and stocked with proper supplies (toilet paper, hand soap, and single-use towels).**

Restroom Cleaning/Supply Log			
Date	Cleaned	Supplied	Name
6/1/2016	x	x	Ima
6/4/2016	x	x	Awesome
6/7/2016	x	x	Sonny
6/10/2016	x	x	Awesome
6/13/2016	x	x	Ima
6/18/2016	x	x	Sonny
6/21/2016	x	x	Ima
6/24/2016	x	x	Awesome
6/28/2016	x	x	Sonny
6/31/2016	x	x	Awesome
6/35/2016	x	x	Ima

This sample log is shortened for brevity. Be sure to include all cleaning dates/logs. This cleaning log can be used as a template for many other types of activities that need to be done and recorded such as equipment and container cleaning, maintaining equipment to maintain safety, checking farm for potential food safety hazards, etc.

(G-11) Food and Smoking Policy: All eating and smoking activities will be conducted outside the crop production areas. Meals will be eaten in the family home with breaks taken in the side yard of the house.

Notes

(G-12) Employee Infectious Disease Policy: Any employee with diarrhea, an open lesion, or who is exhibiting symptoms of other infectious diseases are not allowed to handle fresh produce or to conduct any tasks which may lead to contamination of the product. As a family operation, we understand that this may occur to all employees at once. In this event, we will have our hired help harvest the crop or will postpone harvest until workers are recovered. See sick-day log below.

Employee Infectious Disease Log				
Date	**Employee Name**	**Description**	**Action Taken**	**Supervisor Signature**
7/5/2016	Sonny Farmer	Diarrhea	Sent home until recovered	Ima Farmer
7/28/2016	Har D. Worker	Flu-like symptoms	Sent home until recovered	Ima Farmer

(G-13) Product Contamination Policy: Employees will notify their supervisor/designee if produce comes in contact with blood or other bodily fluid. This is for both human and animal contamination events. The supervisor/designee will then safely dispose of the contaminated product, clean the surrounding area and sanitize surfaces, fill in the log sheet and take any action needed to remove the threat of contamination.

Blood/Body Fluid Policy and Log			
Date	Description	Action Taken	Supervisor Signature
7/28/2016	Har D. Worker vomited at side of field.	Worker sent home, contaminate dug up and thrown in trash and tools sanitized.	Ima Farmer
8/2/2016	Ima cut her hand while packing.	Tomatoes in contact with blood thrown in garbage. Area disinfected and Ima wrapped cut and worked on paperwork.	Ima Farmer

(G-14) First Aid Policy: Employees have been trained and instructed to seek prompt treatment for cuts, abrasions and other injuries, even if very minor. First aid box is located in the garden shed and in the restroom in the house. All cuts will be covered before the employee returns to handling produce or working around food contact surfaces/containers.

First Aid Policy and Log			
Date	Description	Action Taken	Supervisor Signature
7/8/2016	Awesome got a small cut on wrist.	Cut bandaged and shirt changed.	Ima Farmer
8/1/2016	Sonny fell and scraped knee.	Knee bandaged and shorts changed to pants.	Ima Farmer
8/2/16	Ima cut her hand while packing.	Cut bandaged and Ima moved to paperwork.	Ima Farmer
8/3/2016	Awesome got a paper cut from a corn leaf.	Cut bandaged.	Ima Farmer

Notes

Pesticide/Chemical Use

(G-15) Preharvest/postharvest Material Applicators Policy: All employees applying regulated pre-harvest and/or post-harvest materials are licensed. Employees applying non-regulated material have been trained on its proper use. All personnel will have knowledge of and comply with proper use of chemicals used around the farm and what to do if there is a spill. All workers will comply with re-entry requirements of the applied product. Spray records will be kept of all applied products. Our training log is included below.

Chemical Use Log			
Date	Description	Area Applied	Supervisor Signature
5/25/2016	Trifluralin	Between plastic in tomato field.	Ima Farmer
6/15/2016	Trifluralin	Between corn rows.	Ima Farmer
6/28/2016	Glyphosate	Along canal bank and field perimeter	Ima Farmer
7/10/2016	Halosulfuron	Over tomato and corn field	Ima Farmer
8/1/2016	Bonide Copper Spray	Spot application in tomato field	Ima Farmer

All pre and post-harvest material will be stored in a clean and organized site designated for just that purpose. All employees will be trained on proper storage of these chemicals.

Regulated and Non-regulated Material Training Meeting	
By signing below I certify that I have attended the chemical applicators training on May 25, 2016 at Example Farm.	
Name	Signature
Ima Farmer	
Awesome Farmer	
Har D. Worker	
P. Ick Fast	

Insert a copy of pesticide applicator license here.

Part 1: Farm Review

Introduction: This section addresses water usage in the crop production areas, sewage treatment, animal presence on the farm, manure and municipal biosolids applications, soil, and traceability.

Water (Pond, Stream, Well, Municipal, Other)

You will need to have the water tested for microbial pathogens (and supply documentation). The most common test is for generic E. coli. This test can be done at accredited private laboratories. Irrigation water quality tests (salinity, sodium, etc.) can be submitted to the Utah State University's Analytical Laboratories. Visit http://usual.usu.edu/ for more information on tests available and pricing.

> **Municipal water**: test results can be acquired from the local water authority annually. If municipal water is used on the farm, include the water test report in the Food Safety Plan.
> **Well water**: must be tested at least one time per growing season. Monitor to make sure livestock and manure storage areas are far from well recharge and pumping areas.
> **Surface water**: tested three times during growing season (planting, peak use, near harvest)

Farm Example

(1-1, 1-2) Our goal is that all water used on our farm is safe and appropriate for its intended use. Water is a critical component of our operation and also has a potential to spread microbial and chemical contamination. We have listed all activities that require water and where that water comes from below.

Water Use and Sources Log	
Activity	**Primary Source**
Cleaning Equipment	Municipal
Irrigation	Secondary
Cooling	Municipal
Pesticide application	Secondary
Hand washing	Municipal
Drinking	Municipal

(1-3, 1-4) Samples of secondary irrigation water will be submitted three times during the growing season (early, mid, and late).

> *Insert/attach water test report and dates here.*

Municipal water test reports are obtained annually and will be kept on file. Our city's water quality report is attached below.

Contaminant	Violation Y/N	Level Detected ND/Low-High	Unit Measurement	MCLG	MCL	Date Sampled	Likely Source of Contamination
Microbiological Contaminants							
Total Coliform Bacteria	N	3	N/A	0	Presence of coliform bacteria in 5% of monthly samples	2014	Naturally present in the environment
Fecal coliform and E.coli	N	ND	N/A	0	If a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive	2014	Human and animal fecal waste
Inorganic Contaminants							
Barium	N	60-85	ppb	2000	2000	2012	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper a.90% results b.# of homes that exceed the AL	N	a. 156 b. 0	ppb	1300	1300	2014	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	N	200	ppb	4000	4000	2012	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead a.90% results b.# of homes that exceed the AL	N	a. 5600 b. 1	ppt	0	AL=15000	2014	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	N	200-500	ppb	10000	10000	2014	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	N	500	ppt	50000	50000	2012	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium	N	5-34	ppm	None set by EPA	None set by EPA	2012	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills.
TDS (Total Dissolved solids)	N	194-314	ppm	2000	2000	2012	Erosion of natural deposits

(1-5) Water areas (canal/filtration area/hydrants) will be periodically inspected for potential contaminates. Trash or other potential contaminates will be removed and disposed of properly.

Notes

Sewage Treatment

For farms where a sewage line or septic systems are in close proximity to the fields, these systems will need to be monitored.

Farm Example

(1-6, 1-7) The house septic system will be checked annually to ensure proper function.

Sewage Treatment
Septic system performance check on April 14th, 2016. Signed _____

Animals/Wildlife/Livestock

Animals pose a serious contamination risk since animals are in contact with soil, manure, and water. Steps to reduce animal contact with the crop need to be taken. Efforts to deter animals should be taken and will be checked for by the auditor.

(1-8 to 1-11) These sections deal with proximity of the farm to potential contamination sources such as dairy, livestock, fowl production, or manure lagoons. Manure storage is contained and livestock animals are restricted from access to the crops.

Farm Example

(1-12, 1-13) Employees will report animal tracks or visual evidences of animal presence on the farm to their supervisor. Noted animal presence will be logged and steps taken to try and deter reoccurrence.

Animal Presence Log

Date	Sign	Action taken
6/6/2016	Deer tracks noted at bottom of field 1.	Continue to monitor
6/20/2016	Dog feces by canal	Talk to dog owner to keep dog off property
6/27/2016	Deer tracks noted again in same place	Deer repellant sprayed by entrance and exit of deer track on property
7/15/2016	Ducks feeding in flooded area	Keep area from flooding again

Manure and Municipal Biosolids

The use of manure helps improve the soil composition and can decrease fertilizer costs. There are three options to choose from for this section. A) Raw manure applied, B) Only composted manure/biosolids applied, and C) No manure or municipal biosolids applied. Different questions/documentation are required depending on what your farm uses.

> **Raw manure**: apply at least 2 weeks prior to planting or a minimum of 120 days before harvest.
> **Composted manure:** apply only properly treated, composted manure and have analysis reports available for compost. Compost samples can be submitted to the USU Analytical Labs for testing. Many compost manufacturers have analytical reports and can provide these with the product.

Farm Example

(1-18 through 1-21) Option B: Composted manure was applied to field 01 and 02. The composted manure was obtained from a nearby farm with cattle livestock. The composting process was carried out on that property. Before application, the compost was tested.

> *Attach bill of sale for compost here*
>
> *Attach test results here*

Notes

Soils

Field selection is an important first step in reducing possible microbial contamination. Field selection should seek to find a field that provides an excellent opportunity of producing high yielding quality produce as well as minimize the risk of chemical contamination.
You will need to perform a land risk assessment with a description of the land for at least the last 5 years. Depending on what the history is, determine if any steps to mitigate known risks are needed.

> **Land history risks:** evidence of old buildings, flooding or the potential for flooding, heavy metals, chemical spills, recent dumping of trash, recent use of the farm as a dairy, livestock or poultry feedlot.

Be sure each production area is identified and has a unique code to enable easy traceability back to field.

Farm Example

(1-23) The two fields currently being farmed were converted from a conventionally managed pasture 8 years ago. They have been rotated since then between tomatoes, corn and on occasion mixed vegetables. There were no buildings, flooding, spills or dumping on these fields to our knowledge.

(1-24, 1-25) Not applicable

> *If your land has identified land risks, preventative measures need to be taken and documented as well as a soil test to indicate lack of contaminants.*

Traceability
Each product grown should be identified, coded, and a reliable tracing program used to keep track of where produce was grown.

(1-26) *See traceability and recall section in the General Questions section.*

Notes

Part 2: Field Harvest and Field Packing Activities

Introduction: This section deals with conditions in the field as well as harvesting commodities and post-harvest packing if it occurs directly in the field or greenhouse.

Field Sanitation and Hygiene
Hand washing and toilet facilities that are not properly maintained are a potential source of contamination. Steps need to be taken to minimize this risk.

Farm Example
(2-1) A pre-harvest risk assessment was carried out on each production area and documented. (Assessment follows)

Sanitation Units:
Are toilet and wash facilities properly located? Yes, the facilities are within easy walking distance of each production area.
Are the facilities properly stocked? Yes, see cleaning and restock log in general questions section.
Is potable water available for workers? Yes, clean potable water available within easy walking distance of each production area.
Containers/Equipment:
Are harvest containers clean, available and protected? Yes, harvest bins are stored within the storage shed to minimize contaminates and are disinfected at the end of each harvest day.
Is harvest equipment in good condition, clean and available? Yes, the equipment is rust-free, kept in/on/above a clean storage bench in the storage shed and disinfected at the end of each harvest day.
Contamination:
Evidence of domestic or wild animal crop damage? No significant damage, but presence of domestic and wild animals noted. See section 1-12 for specific log.
Evidence of physical contamination or fuel/chemicals which might contaminate crop areas? None noted, all equipment is filled and re-filled away from the production area. Chemical application are prepared away from production are to reduce risk of contamination.
Any sources of biological or physical contamination such as dump sites, manure, or water that might affect food safety? The canal that borders one side of our property could feasibly flood the field. This risk has been noted and a visual assessment of the strength of the canal walls is carried out periodically to monitor for possible breaches.

The questions in the box above serve as an example of questions to ask during a pre-harvest field assessment. Risks and consequently questions about risk will vary from operation to operation. Additional questions may be needed.

(2-2) Sanitation units are not required due to a toilet facility being readily available for the workers.

(2-3, 2-4) Toilet facility available for worker use is in the home adjacent to the fields.

(2-5) Not applicable

Field Harvesting and Transportation

Harvesting equipment and containers are potential contamination sources. Implementing a cleaning schedule for the equipment and containers will help to minimize this risk.

Note that the field harvesting and transportation section can only be audited when the crop is actively being harvested so be sure to schedule your audit at a time when harvesting will be occurring. Of particular importance in this section is keeping containers, vehicles and other harvesting equipment clean and sanitized on a scheduled basis.

Farm Example

(2-6, 2-7) Containers and harvesting equipment will be cleaned at the end of each harvesting day.

Harvesting container and hand harvesting equipment cleaning log	
Date	Person
7/15/2016	Ima
7/17/2016	Ima
7/19/2016	Ima
7/21/2016	Awesome
7/23/2016	Ima
7/25/2016	Sonny
7/27/2016	Sonny

Notes

(2-8) Damaged containers will be repaired if possible and disposed of if no longer functional.

(2-9) Equipment and machinery used to harvest are kept in good repair and minimize damage to crops or possible harm to workers.

(2-10, 2-11) No glass or light bulbs are used on harvesting equipment in our operation.

(2-12) Standard operating procedure in the event of a chemical spill is posted and workers have been trained to comply with this use.

> *See example training logs provided in the general section on how to compose a training log. Provide a training log for chemical spill SOP here.*

(2-13) During harvest, workers will remove any foreign objects (such as glass, metal, rocks, or other items) from the harvesting containers as they work.

> *Provide a training log for removing foreign objects here.*

(2-14) Workers will be trained not to use harvesting containers for non-harvest activities during the harvest season.

> *Provide a training log for single purpose harvesting containers here.*

(2-15) The water we use on harvested product is municipal water and is safe. Workers will be trained to only use municipal water on produce.

(2-16) Workers will remove as much dirt/mud as possible during the harvesting process.

Provide a training log for dirt/mud removal here.

(2-17) Equipment used to transport harvested product is in good repair.

(2-18) Harvested product policy:

All harvested produce will be placed in to clean containers and will be moved from the field to the storage area as soon as possible (at least within 1 hour of harvest) to minimize time in the direct sun after harvest. This product will be loaded onto the 4-wheeler trailer and covered with a tarp during transportation.

(2-19, 2-20) Not applicable

(2-21) Each product container moving out of the field is marked with field of origin and date, as laid out in the traceability section.

Notes

Part 3: House Packing Facilities

This section is for packinghouses located on or near the crop production areas. The main focuses of this section are water used for packing, packing equipment, cleanliness, worker health and hygiene, containers and pest control. Be aware that you may only have this section of the audit performed if the packinghouse is in active use when the auditor is present.

Part 4: Storage and Transportation

The storage and transportation discussed in this section covers those activities that are located on or near crop production areas. This includes transporting harvested produce to the on-site packing facility, and storage in the packinghouse or in standalone storage facilities.

Part 5: No Longer Used

Part 6: Wholesale Distribution Center/Terminal Warehouse

This section is for the wholesale end of the food distribution food chain. Many of the questions and requirements in this section are very similar to those in Part 3 but are geared toward wholesale packing centers. Operations may only accept produce that has come from a GAP certified producer.

Part7: Preventative Food-defense Procedures

This section deals with food supply protection from an intentional contamination by an aggressor (in contrast to the previous sections dealing with accidental contamination). A specific person is assigned to implementing the Food Defense plan.

Audit Scheduling

To apply for USDA GAP & GHP Audit Services, complete the Request for Audit Service form FV-237A (pdf) and the Agreement for Participation in Audit Services form FV-651, and submit them to your local FV audit office, or the contact below, via email or fax. You will need to have your farm plan composed and ready to submit when applying for an audit. Remember that a well-documented and complete farm plan can earn many of the total points available, and will be very helpful in a positive audit experience.

For additional information about fruit and vegetable auditing services, contact the SCI Division, Audit Services Branch at:
Telephone: (202) 720-5021
Fax: (202) 260-8927
Email: FVAudits@ams.usda.gov

Additional Reading and Resources:
AMS GAP Homepage: http://www.ams.usda.gov/services/auditing/gap-ghp
USDA's GAP and GHP User Guide:
http://www.ams.usda.gov/sites/default/files/media/GAPGHP_Audit_Program_User's_Guide%5B1%5D.pdf
USDA's GAP and GHP Audit Verification Checklist:
https://www.ams.usda.gov/sites/default/files/media/GAP-GHP-Checklist.pdf

Other Guides for Preparing for a GAP audit:
Good Agricultural Practices for Small Diversified Farms: Tips and Strategies to Reduce Risk and Pass an Audit. Caroline Farm Stewardship Association. http://www.carolinafarmstewards.org/wp-content/uploads/2013/07/CFSA_GAPS-web.pdf

Good Agricultural Practices Educational Resources. Kentucky Department of Agriculture.
http://www.kyagr.com/marketing/GAP-resources.html

Agrifood Safety. Michigan State University Extension. http://gaps.msue.msu.edu/usda_gap_2011.pdf

Good Agricultural Practices Food Safety Plan. Penn State Extension.
http://extension.psu.edu/food/safety/farm/how-do-i-write-a-food-safety-plan/sample-harmonized-food-safety-plan

Food Safety Plan 4 U. University of Minnesota. http://safety.cfans.umn.edu/fsp4u/

Real-Farm GAP Application Example:
https://www.kyagr.com/marketing/documents/GAP_USDASampleSafetyManual.pdf

APPENDIX

Some Companies Who Have Conducted GAP Audits in Utah

Certification Services, QCS
352-377-0133
http://www.qcsinfo.org/contact/
Local Utah auditor: Frank Sesto (frank@produsure.net)

NSF Agriculture
1-877-893-1325 or email: agriculture@nsf.org.
http://www.nsf.org/services/by-industry/food-safety-quality/agriculture

Primus GFS
805-361-1912
http://www.primuslabs.com/services/primusgfs.aspx
World Quality Services
www.wqscert.com
Local contact: Miles Murphy, 360-298-0742

Utah Dept. of Agriculture and Food
Dave Basinger
Phone: 435-820-4267, email: dbasinger@utah.gov

Some Testing Laboratories that have been used by Utah Growers

Miller Labs
1675 West 2750 South
Ogden, UT 84401
Phone: 801-627-2202
www.kelatron.com/lab-testing

Pacific Agricultural Laboratory
12505 NW Cornell Road
Portland, OR 97229
Phone: 503-626-7943
www.pacaglab.com

PrimusLabs—listed above

Utah State University Analytical Laboratories
9400 Old Main Hill
1541 N 800 E
Logan Utah 84322-9400
Phone: 435-797-2217
http://usual.usu.edu/index.html

USU Analytical Laboratories: What we don't do (and who does)
http://usual.usu.edu/about/referral/index.html

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