

The background of the page is a repeating pattern of watermelon slices. Each slice is a wedge shape, colored in a light pinkish-red with a green rind and small black seeds. The slices are arranged in a staggered grid across the entire page.

Supplemental Guidance



Garden Location

It is important to locate your garden away from any current or previous sources of contamination. If the water or soil used to grow your plants is contaminated, it can also contaminate the food your plants produce and make you sick. Contamination could be the result of a previous way the land was used, such as for a home or business, or it could be due to its proximity to a hazardous site, such as a septic leach field. It is also important to think about how you will protect the garden from new sources of contamination.

How was the land for your garden used in the past?

Knowing how the land for your garden was used in the past may factor in to your decision between having raised or sunken (in-ground) beds. For example, if the land for your garden once housed a dry cleaning operation, it is possible the soil may be contaminated from this previous use, even if it was a long time ago. A more common example might be if there used to be standing buildings on the land that have since been torn down. Materials from those buildings, such as lead paint, may have contaminated the soil during their lifetime or as part of the process of being torn down, even if the structures are now long gone. The School Garden Coordinator can help you evaluate your options if you are not sure what to do once you have information about the land's historical uses or if you are not able to find that information.

What, if any, are the existing sources of potential contamination based on the location you have chosen for your garden (e.g., septic tank/leach fields; dumpsters; animals; compost area; low-lying, poorly drained areas; areas subject to chemical applications; areas subject to contamination by rainwater runoff from gutters; etc.)?

Try to think of all the potential sources of contamination for your garden, and then factor that information in to your decision of garden location to minimize the risk from those sources. For example, if you have a chicken coop and a compost pile, locate your garden upslope to minimize the potential for contamination (via runoff water contaminated with chicken feces). Or, if the land for the garden is located in a more rural area, animals like deer or elk may be a potential source of contamination (via feces – that is, if they leave any produce for you after they've had their fill!). The School Garden Coordinator can help you evaluate your options if you are not sure what to do once you believe you have identified potential sources of contamination.

How will you prevent unauthorized entry into the garden by people, pests, or animals?

Keeping your garden secure and protected from unauthorized entry is important. You could build a fence, use/incorporate wire mesh, use pin wheels that move with the wind, or find other methods.

Garden Site Plan

Finalize your garden site plan after you have considered the information you observed and gathered about potential sources of contamination and consulted with the School and Community Garden Program Coordinator at the Arizona Department of Health Services. Please include adjacent structures and identify other important areas, such as the location of handwashing sinks, garden equipment storage areas, etc.



Garden Equipment

In this section, indicate what equipment will be used in your garden, where it will be stored, and how it should be maintained (cleaned). This will vary according to the function of the equipment, such as if it is used for maintenance or harvesting.

Garden maintenance equipment should be stored in a secure area; unfortunately, this equipment is sometimes a target for theft. Wherever you find is best to store the equipment, the storage area should be maintained clean. When equipment is cleaned, water used for cleaning must be potable water. You may consider creating a schedule for cleaning equipment and identifying who is responsible for making sure the schedule is followed and the equipment and storage area are maintained.

Equipment that is used for harvesting and comes into direct contact with produce, such as produce bins, should be cleaned and sanitized after each harvest event. Then, they should be stored in a clean, dry, protected location to prevent recontamination. This may be a different location from where other garden equipment is stored. In a school setting, the kitchen staff may be best equipped to perform these functions, since they are knowledgeable about proper washing, rinsing and sanitizing methods and procedures, and they have storage areas for cleaned and sanitized equipment. Other tools used for harvesting that do not come into direct contact with produce, such as spades, do not need to be sanitized after each harvest event, but they should be maintained clean and stored in a clean, dry area.

A comprehensive garden equipment policy will answer the following questions:

-  What equipment will be used for maintaining the garden? What equipment will be used for harvesting produce?
-  Where will garden maintenance equipment be stored? Garden harvesting equipment?
-  Where will garden maintenance equipment be cleaned? Garden harvesting equipment?
-  When or how often should garden maintenance equipment be cleaned? Garden harvesting equipment?
-  Who will be responsible for washing, rinsing and sanitizing the garden harvesting equipment that comes into direct contact with produce? What procedure should be followed? What sanitizer should be used, and at what concentration should it be prepared? How can the person responsible check the concentration of the sanitizer?



Pest Management

It helps to have a plan for managing pests before they become an issue, rather than reacting to a pest problem. Garden produce must not be contaminated by pesticides, insecticides, rodenticides, or any other potentially toxic chemical deterrent for weeds or pests, but often these are the methods that first come to mind when we think of controlling them.

If your garden will be located in a school setting, the individual managing the garden often is not the same person who manages pest control applications. Talk with the individual(s) responsible for pest control applications so you can understand under what circumstances chemical controls are applied, ensure that they will not be applied to the garden or in a way that may contaminate produce, and explore ways to ensure chemical controls are applied the minimal amount necessary.

A comprehensive pest management policy will answer the following questions:

-  Who is responsible for pest management in the garden?
-  If a pest is identified, what control(s) will be used? If the first control(s) is ineffective, then what should be done?
-  If pests are responsible for contaminating produce – for example, if you observe visible feces on the produce – then what should be done and who should do it?

Health and Hygiene

Some illnesses can be spread from person to person through food. It is important that no one who is sick handles produce. Gardeners should be educated about the illnesses and symptoms that will require them to exclude themselves from working with produce in the garden. If a gardener or someone in the gardener's household is diagnosed with one of these illnesses, or if he or she is ill with one or more of the following symptoms, then he or she should not work in the garden. These illnesses and symptoms should be included your health and hygiene policy.

Illnesses: Salmonella typhi, non-typhoidal Salmonella, E. coli O157:H7, Shigella, Norovirus, Hepatitis A

Symptoms: Diarrhea, vomiting, fever with sore throat, jaundice, infected cuts or open sores

Of course, it is important that even healthy gardeners practice good hygiene by washing their hands before working with produce and any time they become contaminated thereafter (e.g., after going to the bathroom). Thus, facilities with ample supplies for good handwashing should be maintained.



Health and Hygiene, cont'd.

Finally, small accidents and injuries may occur in the garden. When they do, you will want to be prepared to address them with first aid supplies. You may also consider keeping a log of any injuries if your school nurse does not already do so.

A comprehensive health and hygiene policy will answer the following questions:

-  Who will conduct handwashing training? Who will conduct training on the illnesses and symptoms that will cause a gardener to be excluded?
-  When and where will the training take place? How will you verify that gardeners have been trained?
-  How will you handle the process of excluding gardeners?
-  Where will gardeners wash their hands?
-  Who is responsible for ensuring bathrooms/handwashing stations are clean and supplied with toilet paper, water, soap, single use paper towels and a towel disposal container (or other approved method, like hand dryers)? How often will they be cleaned and supplied?
-  Who will supervise gardeners and help them uphold standards of good hygiene as they work in the garden?
-  What is the procedure for responding to accidents or injuries in the garden? Who is responsible for putting together and maintaining a first aid kit? Where will the first aid kit be located?



Harvesting Procedures

Having a comprehensive set of harvesting procedures makes it easy for those supervising and working in the garden – it's like a road map for food safety. You may consider creating this set of procedures in the form of a checklist.

A comprehensive procedure will include the following:

-  Checking to exclude ill gardeners
-  Ensuring gardeners take steps to ensure good hygiene
-  Someone to supervise gardeners
-  Obtaining clean garden equipment
-  Obtaining clean and sanitized harvest equipment (e.g., produce baskets)
-  Visually inspecting produce for damage or decay
-  Transporting to food service area

Handling Procedures

Just like for harvesting, having a comprehensive set of handling procedures makes it easy for those handling the produce to know what to do and how to do it. In a school setting, you may consider including cafeteria staff to help create the procedure if they will be doing the produce handling.

Your procedures for handling are very important, because these procedures lay the groundwork for effective traceback in the event of a foodborne illness outbreak. “Traceback” constitutes the means and methods of finding the source of a food implicated in an outbreak.

A comprehensive procedure will include the following information:

-  Who is responsible for receiving produce in the cafeteria
-  How produce should be logged
-  How produce should be stored (such as: not co-mingled with produce from another source, properly labeled, dated, put in a cold holding unit, put in a dry storage area, etc.)
-  How to track whether/when produce was used in a meal or whether/when produce is sold (e.g., at a farmer's market), as applicable



Writing a Standard Operating Procedure

Writing a standard operating procedure (SOP) is easier than it may seem. Below are elements of effective written SOPs. Use them to help write your own SOPs for your Food Safety Plan.

It is important to remember that the work of creating SOPs is, in a way, never finished. As the operation, management, or purpose of a garden changes over time, so too should your SOPs. As part of the certification through the ADHS School Garden Program, you will review your SOPs for updates at least once per year.

Purpose

The purpose is a brief statement summarizing why the standard operating procedure is in place. In other words, why the standard operating procedure is needed/important/significant.

Contacts/Person(s) in Charge

Identify the primary contact or person in charge for the SOP. This may be more than one person. For example, in your health and hygiene policy, you may list both the School Garden Manager and the school nurse. Or for your pest management policy, you may list the School Garden Manager and the school facilities manager.

Policy

The policy is a brief statement of principle. This can be drawn from the stated purpose. For example, in a pest management SOP, if the purpose is to prevent children's exposure to pesticides from the garden, the policy may be to use only non-chemical methods of pest deterrents.

Procedures

The procedures translate the policy into specific actions and steps. A well written SOP should allow someone with no knowledge of the procedure to follow and accomplish it. Some procedures may best be organized in the form of linear, step-by-step sequences. Other procedures may not fit that mold. Regardless of the form they take or the way they are organized, your procedures should be specific, and tailored to how your garden is operated.

