

## **When Initiating Good Agricultural Practices (GAPs): Five Things to Implement**

Establishing a GAPs protocol can be daunting. Below are a series of suggested steps for implementing the **most effective** good agricultural practices for the **lowest cost**. Even if you are exempt from the Food Safety Modernization Act and have no intentions of getting certified – these measures can go a long way in lowering the risk of contamination on your farm.

### **Consider high-risk crops first when enacting GAPs.**

High risk crops are those that have had a food safety outbreak in the past – some commodities have had several. These crops are often eaten raw (so they have no heating step to kill the microbes), and have a textured surface that facilitates the attachment of potentially harmful bacteria.

These high-risk crops include: tomatoes, leafy greens (such as lettuce and spinach), cantaloupes, spring onions, berries, fresh herbs, cucumbers, and peppers.

The following checklist addresses five categories that are the most important to manage when enacting GAPs on your farm:

#### 1) Worker Education

Worker hygiene plays an important part of enacting GAPs on your farm. As the people who come in contact with crops repeatedly throughout growing, harvesting, and packing, workers should be educated on the importance of not working when sick, good hygiene (such as handwashing), as well as how to perform their job responsibilities with food safety in mind. If workers have an understanding of the importance of GAPs and food safety, they will be more apt to follow and enforce SOPs.

#### 2) Water usage

Water (used for irrigation, chemicals and in the packinghouse) contacts your crops several times during the growing, harvesting, and packing process. Water should be tested for microbial contamination so that it isn't passed onto the crops.

#### 3) Compost/Manure Use and Other Agricultural Inputs

Since the base product in compost and manure is animal waste, both are very important to manage properly. When safely stored and applied, potentially harmful bacteria are killed, and the risk of contamination is greatly lowered. Operators should similarly assess microbial risk of other agricultural inputs (teas, emulsions, etc.) and implement risk reduction practices accordingly.

#### 4) Sanitation of Toilets and Harvest Materials

Workers should have access to a toilet and handwashing station in reasonable distance to their working areas, so that they are not tempted to use production areas. Additionally, harvest materials such as picking baskets should be washed between use to prevent contamination.

#### 5) Wildlife

Wildlife, such as deer, birds, and rodents, are carriers of pathogenic bacteria. Tracking wildlife activity in your operation will help target effective control efforts. Visual assessment of wildlife signs and/or damage is an important activity to conduct before each harvest. Although attempts are usually made to keep wildlife from fields, try to prevent wildlife from entering packinghouses as well.

### GAPs Checklist

What is the name of your farm? \_\_\_\_\_

Who is responsible for monitoring GAPs on your farm and completing this checklist?

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What high-risk crops do you grow on your farm? \_\_\_\_\_

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#### 1) Water Usage

Questions	Answers
What irrigation method(s) are you using?	
What source of irrigation water do you use?	
<ul style="list-style-type: none"><li>• Surface water</li></ul>	
Is the water source located in a low-lying area that can receive runoff and sediments?	
<ul style="list-style-type: none"><li>• Well</li></ul>	
Is the casing and well cap secure and sealed from the environment?	
How far is the distance between the well and any sources of contamination (septic system, etc.).	
Do you have the water sources tested regularly for <i>E. coli</i> ? Do you have record of these water tests?	
<ul style="list-style-type: none"><li>• Surface water: 3 times a season</li></ul>	

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<ul style="list-style-type: none"> <li>• Well: Once a season</li> </ul>	
What source of water are you using for surface application to plants?	
What water source are you using in your packinghouse?	

**2) Compost/ Manure Use**

Questions	Answers
Do you use manure on growing areas?	
<ul style="list-style-type: none"> <li>• Is manure applied and incorporated into soils at least 120 days prior to harvest for crops that contact the ground (e.g. tomatoes) and 90 days for crops that do not contact the ground (e.g. sweet corn)?</li> </ul>	
<ul style="list-style-type: none"> <li>• Do barriers exist to reduce manure runoff into water sources and production fields?</li> </ul>	
<ul style="list-style-type: none"> <li>• Are records kept of rates and dates of manure application and harvest dates?</li> </ul>	
Do you use compost made from animal excrement, animal parts, or food waste on growing areas?	
<ul style="list-style-type: none"> <li>• Are you familiar with compost procedures, including aeration, temperature, and equipment sanitation?</li> </ul>	
<ul style="list-style-type: none"> <li>• Do you keep compost records, including temperature, date, and when turned?</li> </ul>	
<ul style="list-style-type: none"> <li>• Where are you storing on-farm compost before application to fields? Do barriers exist</li> </ul>	

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to reduce compost runoff and infiltration into soil?	
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**3) Worker Education**

Questions	Answers
Do you have worker training for handwashing and personal hygiene? Do you have records?	
Do you have worker training for what to do in the case of worker illness or injury?	
Are signs posted reminding workers of personal hygiene requirements? Are these signs posted in the workers' native language?	
Are workers educated in GAPs procedures on the farm? Are they told of SOPs and asked to follow them?	
Are workers trained to not pick crops that may be contaminated with manure?	

**4) Sanitation of Toilet Facilities and Harvest Materials**

Questions	Answers
Do field workers have access to a toilet and handwashing station?	
Are records kept for toilet cleaning?	
Do you clean picking baskets and harvest materials after use?	

**5) Wildlife and Pets**

Questions	Answers
Do you attempt to restrict wild animals and pets from entering production areas?	
Are rodents, birds, and other animals restricted from packing areas?	
Do you keep records of wildlife problem areas?	
Are field walked before harvest to check for animal manure? Are these areas marked to avoid picking crops around fecal contamination?	

**6) Good Handling Practices**

Do you allow animals (domestic or wild) in trucks and packing areas?	
Do you clean the packinghouse and transportation areas (including trucks) regularly?	