



GAP Practices: In the Field--Safe Water Sources

Water sources for irrigation and drinkable water (potable water)

- Good management practices in place to protect the quality of irrigation water
- Farm livestock access to ponds and streams used for irrigation limited
- Toilet facilities and handwashing stations, for workers and pick your own patrons are supplied with potable water

Water use in the field

Irrigation water has been the source of contamination in several foodborne disease outbreaks attributed to produce. Clean water is most important when in direct contact with edible portion of crop close to or at harvest--whether you are irrigating or applying a pesticide.

Currently, there are no required standards or frequency of testing for irrigation water. But with the Food Safety Modernization Act Produce Safety Rule, that will soon be changing. Right now (March 2014), the generally accepted practice is using the EPA water standard of no more than 126 CFU *E. coli* per 100 mL of water. Testing sample frequency of surface irrigation water is recommended at least 3 times per growing season—beginning, middle, and before harvest. However, by June 2015, these recommendations will probably change—updates to fact sheet to follow.

Things to think about if you use surface water for irrigation:

- Do you use drip, under-tree or low volume spray irrigation to reduce water contact with produce?
- If you use overhead irrigation or evaporative cooling, do you test your irrigation water for fecal coliform concentrations during the growing season?
- If livestock operations are located nearby the irrigation source, are animals excluded?
- Are good management practices in place to protect the quality of irrigation water?
- Do you use only potable water to apply foliar applications including pesticides, nutrients, and growth regulators?

What can you do?

Choose application methods that are less risky.

Use drip irrigation whenever possible, especially when using non-potable water. This method reduces the risk of crop contamination because the edible parts of most crops are not wetted directly.

- Microbial risks in overhead irrigation are minimized by using potable water. If surface water is used for overhead irrigation or pesticide application, examine the source of the water and be aware of upstream use of that waterway. By applying overhead irrigation in the morning, leaf drying time is reduced. Rapid drying and ultraviolet light will reduce survival of human pathogens on crops.
- If you are using surface water (pond, stream), consider not using overhead irrigation or pesticide application methods within one week of harvest.

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- When possible, use potable water for sprays. When potable water is not available, test water quality and keep records. Consider possibility of contamination when processing and handling produce down the line.
 - Keep records of application methods, rates, and dates.

Management/location of farm animals

- Do not allow pets, poultry, or livestock to roam in crop areas, especially close to harvest time.
- Do not let "pick your own" patrons bring their pets along.
- Minimize wild animal and bird traffic in ponds and fields where possible.
- Clean tractors that were used in manure handling prior to entering produce fields

Potable water must be available in the field for workers and "pick your own patrons" to wash their hands and to drink.

- You can set up a portable and temporary handwashing station quite easily if potable water is not readily available in the field.

(Put drawing of temp handwashing station, using large McDonalds like cooler, collection bucket, paper towels, soap, and trash bin)