

PRACTICES TO REDUCE ON-FARM FOOD SAFETY RISKS

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1. **Understand that food safety on your farm is your responsibility.** Good food safety practices can protect you and your customers. Food safety is a cost of doing business. If you don't pay the cost upfront, it may cost you the farm if a customer gets sick.
2. **Make a plan and write it down.** If it is not written, it does not exist as far as regulators are concerned. Then follow the plan! Record what you do and when.
3. **Train your workers.** This is the easiest and most financially effective food safety practice. Train them (and yourself) to be aware of food safety risks and to follow the procedures you put in your plan. Worker training includes hand washing and other hygiene practices, illness and accident procedures, and other standard operating procedures for your farm. Be a good role model!!
4. **Know your water quality.** Know the quality of the irrigation water which touches the edible portion of your crop. You will need to test it, and compare it to EPA's recreational water standards, which are currently what the FSMA is now using. That will change if research shows something different.
5. **Minimize risks when using compost and manure.** Some food borne illness pathogens remain in manure for 3 months or more. Compost manures properly. Be prudent, plan for 120 days between application and harvest of the crop, even if you have tree crops. Document the application dates and what was applied. Be aware of your neighbor's use of manures as well...pathogens can be airborne, carried in runoff water, or on equipment.
6. **Minimize wildlife risk.** You cannot prevent all wildlife intrusion onto your farm, but you can do a pre-harvest assessment of your fields. If there is damaged crop or fecal contamination, you can choose not to harvest those plants and the area around them.
7. **Do not pick or pack dropped or damaged fruit.** Foodborne illness pathogens enter damaged fruit more easily than intact fruit. Drops may have come into contact with animal feces on the ground.
8. **Keep postharvest water clean.** Use potable water. Add a sanitizer to your water when washing produce. Monitor the sanitizer levels and keep any surfaces the produce touches clean and sanitized. Sanitizers do not clean produce but prevent cross-contamination from water or produce to another.
9. **Know how produce moves around your farm and the surfaces it contacts.** Make a diagram. Identify every surface produce touches, from the field to the buyer or consumer, including packing containers, sorting tables, cooler shelves, etc. This will help you understand where contamination could occur and help you develop an effective cleaning and sanitation program. Your sanitation program should start with cleaning contact surfaces. Remove dirt and debris from those surfaces with an appropriate detergent. Follow with a sanitizer, which will not work properly if there is too much soil and debris.
10. **Know which produce is higher risk.** Identify higher risk produce: produce eaten raw; produce that contacts soil directly; produce that is hard to wash – e.g. salad mix, lettuce, strawberries, and cantaloupes. Don't assume that because the peel is smooth that it is lower risk...Recent outbreaks include cucumbers tomatoes. Focus your efforts on higher risk produce. Produce that has a kill step, i.e. it is cooked or processed; is much lower risk. e.g. potatoes or winter squash.

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United States Department of Agriculture, University of California, Placer and Nevada Counties cooperating.

Adapted from: <http://www.growingproduce.com/vegetables/how-to-manage-food-safety-risks/>
Interview with Betsy Bihn, <http://producesafetyalliance.cornell.edu>.

Food Safety Resources

Food Safety Modernization Act: FSMA Final Rule on Produce Safety <http://www.fda.gov/food/guidanceregulation/fsma/ucm334114.htm>

Produce Safety Alliance <http://producesafetyalliance.cornell.edu/>

Food Safety Begins on the Farm
<https://gaps.cornell.edu/educational-materials/food-safety-begins-farm>

On Farm Food Safety Project – food safety plan
<http://onfarmfoodsafety.org/create-a-food-safety-manual/>

Post harvest chlorination <http://ucfoodsafety.ucdavis.edu/files/26414.pdf>

Recordkeeping sheets <https://gaps.cornell.edu/educational-materials>