

Introduction to Produce Safety on the Farm

Fact Sheet for Produce Growers

Produce safety is a complex issue. While each farm is unique and has its own specific risk profile, there are some basic areas of concern that are universal. This fact sheet draws upon the FDA Food Safety Modernization Act (FSMA) Produce Safety Rule and existing Good Agricultural Practices (GAPs) guidance. But first some background.

What is FSMA and the Produce Safety Rule?

The Food Safety Modernization Act (FSMA) is one of the most extensive changes to food regulation in the past 80 years. FSMA consists of many new rules, one of which is the Produce Safety Rule (PSR). The PSR establishes the first ever federal regulatory standards for the safe growing, harvesting, packing, and holding of fresh produce grown for human consumption. If you are growing fresh produce that is typically consumed raw, then the PSR applies. There are exemptions¹ within the PSR based on farm size and markets, the specific commodity, or if the produce is sold for commercial processing.

What are GAPs?

Good Agricultural Practices (GAPs) are voluntary guidelines to reduce risks associated with fresh produce. These are published by various associations to cover all aspects of produce growing. Some are commodity or region specific, and others are general guidance. Pay close attention to the source and its topic, as food safety risks vary significantly depending on region, commodity, and growing environment (e.g., greenhouse vs field production).

What is the difference between the FSMA PSR and GAPs?

While they both aim to reduce produce safety risks and correlate significantly, there are key differences. The PSR is a federal regulation, whereas GAPs food safety audits are through third parties you pay for (e.g., USDA GAP Audits) and are not regulatory in nature. Another thing to keep in mind is that the Produce Safety Rule entails a regulatory inspection, while GAP audits are voluntary. Also, each GAP audit scheme² is unique, with its own requirements and pricing. FSMA PSR inspections will begin in 2019 through the Kansas Department of Agriculture.

How do I know if I am following FSMA PSR requirements?

A great place to start is attending a Produce Safety Alliance³ Grower Training. This training will review the entire rule and how it relates to your farm, as well as provide a certificate of training that is good for life. K-State Research and Extension is offering these trainings⁴ on a continuing basis throughout the state. After completing this training, growers are able to receive an official On-Farm Readiness Review (OFRR). K-State Research and Extension has partnered with the Kansas Department of Agriculture to offer these voluntary OFRRs, which are completely free and confidential. The purpose of the OFRR is to spend time with growers reviewing their practices and examining potential areas of concern, taking an educational approach.

Visit ksre.ksu.edu/producesafety for more information

¹ www.fda.gov/downloads/Food/GuidanceRegulation/FSMA/UCM472499.pdf

² The new 2018 USDA GAP Harmonized Audit is aligned with the PSR to demonstrate rule compliance

³ <https://producesafetyalliance.cornell.edu/training/grower-training-courses/>

⁴ ksre.ksu.edu/producesafety

Produce Safety Begins on the Farm

Water Quality: Know agricultural water quality — both production and post-harvest — through testing, especially if using wells or surface water. When washing produce (single pass or submersion), understand how to manage risks.

1. It is important to understand that washing produce does not remove all pathogens and can often **increase** produce risks.
2. Commodity-specific guidance helps to know when washing is recommended, as well as guidance on maintaining water quality.
3. Use only sanitizers that are labeled for use in produce.
 - Quality of wash water, if used, needs to be maintained to avoid cross-contamination:
 - Chemical sanitizer or devices such as filters or UV units;
 - Monitoring turbidity, pH, sanitizer concentration, free chlorine, temperature, etc.

Worker Training and Hygiene: Have an annual training program for all workers. Take steps to ensure toilet and hand washing facilities are available and good hygiene practices are used.

1. Training is easily understood and covers the principles of food safety and good hygiene.
2. Bathrooms are accessible, clean, and properly stocked with toilet paper, soap, single-use hand drying, and other supplies for good sanitation.
3. Sick workers are restricted from handling produce and working in produce-contact areas.

Inspecting Produce: During the growing season, monitor production areas for signs of potential contamination.

1. Immediately prior to harvest, assess the crops and production areas for signs of contamination.
2. Measures are taken to limit domesticated animals and wildlife from production areas.

3. Appropriate actions are taken in response to field intrusion:
 - Follow the tracks from entry to exit, looking for signs of feeding, rooting, or feces.
 - When signs of heavy feeding or feces are present, the affected produce is not harvested and feces are buried or removed from the field.
 - If recurring intrusion, take proactive steps to address the problem.

Soil Amendments: If using animal-based soil amendments (manures, fish emulsion, etc.) understand and control the associated risks. Untreated manure amendments pose the highest risks.

1. Depending on the treatment status (raw vs composted), the application methods and harvest intervals are consistent with current guidance.
2. Application and storage practices do not contaminate produce or food contact surfaces.

Sanitation: Wash all food contact surfaces (containers, bins, harvesting tools, grading tables, washing bays, etc.) with a detergent and sanitize when needed.

1. To properly clean means scrubbing with a detergent (e.g., household dish soap) and washing with potable water. Simply wiping or rinsing everything down is not proper sanitation.
2. Use chemicals that are labeled for use on food contact surfaces.

Transportation and Storage: Ensure the sanitary transportation and storage of produce. This begins from the moment of harvest through buyer delivery.

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