

Food Safety on the Farm: Good Agricultural Practices and Good Handling Practices – Worker Health and Hygiene¹

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As part of the Food Safety on the Farm series, a collection that reviews the generally recognized principles of GAPs as they relate to produce, primarily at the farm level and with particular focus on fresh Florida crops and practices, this publication focuses on GAPs and GHPs relating specifically to worker health and hygiene. The publications in this series can be found online at the EDIS website at http://edis.ifas.ufl.edu/topic_series_food_safety_on_the_farm.

Introduction

Good agricultural practices (GAPs) and good handling practices (GHPs) encompass the general procedures that growers, packers and processors of fresh fruits and vegetables should follow to ensure the safety of their product. GAPs usually deal with preharvest practices (i.e., in the field), while GHPs cover postharvest practices, including packing and shipping. This factsheet covers GAPs and GHPs relating to worker health and hygiene. There are seven other Florida Cooperative Extension factsheets in the 'Food Safety on the Farm' series that focus on specific aspects of the GAPs program and how they relate to Florida crops and practices.

Microbial Hazards

Contact between fresh produce and fecal material has historically been the cause of most foodborne illnesses.

Pathogenic microorganisms can be found on employees, whether they come from an infectious disease, an open wound, or a lack of basic hygiene. Food workers must fully understand and practice proper hygiene or they risk unintentional contamination of produce, water, and other workers. Operators should recognize and establish agricultural practices that minimize the risk of contamination between fresh produce and sources of microbial hazards.

Regulatory Background

The federal government regulates standards for worker health and hygiene during the pre- and postharvest handling of produce. Title 21, part 110.10 of the Code of Federal Regulations (CFR) describes general provisions for the hygiene of workers in food manufacturing plants (1). These guidelines can be adapted to other areas of food production including in agricultural fields, in transport and in small-scale operations like roadside produce stands. Additionally, the Occupational Safety and Health Act (OSHA) in the CFR lists standards for protecting worker health that supervisory personnel should follow (2, 3).

In response and recognition of growing food safety issues, the Food Safety Modernization Act was passed by Congress and signed by the President in January 2011. The new law requires companies to implement a food safety program that significantly minimizes potential hazards and risk of

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foodborne illness. Taking immediate steps to implement worker health and hygiene GAPs will benefit companies and produce safety.

How to Control Potential Hazards

Good agricultural practices are imperative to reduce potential hazards in food. The U.S. Food and Drug Administration identified employee training and the promotion of hygienic practices as major areas to monitor (4).

Personal Health and Hygiene

The following GAPs should be considered to ensure all employees working with fresh produce follow personal health and hygiene, whether they directly contact the produce or not.

- **Establish a training program.** Make sure all employees understand basic sanitation and hygiene principles through a training program, one-on-one instruction, or demonstration, such as of proper hand-washing technique. Level of understanding, follow-up and depth of training can depend on the responsibilities and requirements of the workers. Put hand-washing posters near hand-washing facilities to reinforce proper hand-washing procedures. Ensure that all new employees are trained before they begin working, and that all employees are trained at least once per year or at the beginning of each new packing season. This should be followed up by routine checks to ensure compliance.
- **Become familiar with typical signs and symptoms of infectious diseases.** Exclude workers who show signs and symptoms of illness from working directly or indirectly with fresh produce. Examples of pathogens that can cause infectious disease through food are *Salmonella*, *Shigella*, *Escherichia coli* O157:H7, and hepatitis A virus, just to name a few. Common symptoms of foodborne disease are fever, diarrhea and vomiting. Instruct employees with illness to tell supervisors before beginning work. In some instances, workers must be prohibited from working around product altogether.
- **Provide protection from a lesion.** Do not allow employees to work with fresh produce or equipment if they have a lesion, such as a boil or wound, that cannot be covered up completely. Open sores must be covered with a waterproof dressing.
- **Consider alternative good hygienic practices.** Single-use gloves, in combination with hand washing, can be an effective hygienic tool if used properly and not be

a means of spreading pathogens. Change gloves after eating, smoking, using the toilet, handling materials other than fresh produce, or any time the gloves are damaged or contaminated. Consider installing automatic faucets and paper towel dispensers to avoid recontamination after hand washing.

- **Implement a dress code.** Employees should wear clean clothes and/or clean protective clothing such as uniforms or aprons. Protective clothing should be removed prior to using the toilet. Other habits that can minimize contamination of produce by employees include keeping fingernails short, not wearing jewelry, wearing hair restraints or coverings, and not carrying personal items in pockets.
- **Ensure good hygienic practices are followed by visitors.** Make sure inspectors, buyers, and other visitors to the farm, packing, or transport facilities follow established hygienic practices whenever they come into contact with fresh produce.

Training

The sanitation standards outlined by the Occupational Safety and Health Act should be considered in training sessions for fresh produce workers (2, 3). Suggested areas of training are below.

- **The importance of good hygiene**—All workers need to understand how poor personal cleanliness can affect themselves and consumers of the fresh produce they handle. Unsanitary practices can cause illness in both workers and the public.
- **The importance of hand washing**—Pathogens that cause disease are frequently found in feces. Washing hands thoroughly before work and after using the toilet are important for reducing the risk of contaminating fresh produce.
- **The importance of proper hand-washing techniques**—Teach workers how to effectively wash hands and exposed portions of arms. Proper technique includes rigorously rubbing hands to dislodge bacteria, using soap with warm water, cleaning under fingernails and between fingers, rinsing, and drying hands with a single-use paper towel or air dryer. Hand washing should last at least 20 seconds.
- **The importance of using toilet facilities**—Instruct workers to use designated toilet facilities to prevent contamination of fields, produce, other workers, and water supplies. Designate specific areas for other employee

activities such as eating, drinking, smoking, breaks, and storing personal effects.

U-Pick Operations and Roadside Stands

Growers who sell directly to customers or allow customers to pick fresh produce in the field should consider the following health and hygiene GAPs:

- Promote good hygienic practices such as providing handwashing stations for customers in the field.
- Provide clean, properly supplied, and convenient toilets for customers.
- Promote good handling/processing practices such as encouraging customers to wash fresh produce before eating.

References

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