

Mind the GAP

What should you know about the food safety practices of the local farms that provide produce to your school meals program?

By Arianne Corbett, RD, SNS

Have you ever tasted a fresh strawberry? I mean really fresh? Straight from the vine? Warm from the sun? So sticky and sweet it almost melts in your mouth? Every spring, when I was a child, my parents would take my sister and me to an area “U-pick” strawberry farm. Eager with anticipation, we would literally run, from the car to the field, in fierce competition to make certain the other sister didn’t get to the best strawberries first. I can remember spending hours in the fields picking and eating—and loving life.

Once we were exhausted (and covered from head to toe in a mixture of dirt and bright red, sticky juice), we would head for home with flats upon flats of big, fresh, delicious strawberries—enough to make shortcake, pies and jam for weeks. Little did I know at the time that experiences like mine were representative of the resurrection of a national movement to bring America back to the small family farm—and teach so many more children how a fresh strawberry really tastes.

In recent years, the concept of “local food” has taken much of the country by storm. On a national level, the local food movement is the subject of more TV shows and documentaries than you can count. And in your own community, the trend may have led to a rise in farmers’ markets and roadside stands or a greater quantity and variety of locally grown fruits and vegetables available at the supermarket. Surely, at the very least, you’ve heard more references to and interest in farm-to-school programs.

Know Your Farmer

The local food movement is a collaborative effort to build more locally based, self-reliant food systems in support of the theory that locally grown food supports the community, strengthens family farms and can promote health by teaching children and adults the actual origins of their food. To this end, the U.S. Department of Agriculture (USDA) has launched a department-wide effort, “Know Your Farmer, Know Your Food” (see sidebar at the bottom of the article), to better connect consumers with local producers.

Many school nutrition directors are already blazing the local food trail. According to SNA research, approximately one-third of school nutrition directors are purchasing food items from local growers, with an additional 22% considering options for going local. Interest in the availability of locally sourced food seems to be growing exponentially. But along with the benefits, management of such a program is linked to a host of challenges. These include working directly with local farmers, making procurement changes to accommodate their business model; coordinating menus with growing seasons and harvests; fine-tuning distribution channels; developing new marketing strategies; finding sufficient refrigerator/freezer storage space to hold products past harvest; and, arguably

most important, ensuring that the farms you purchase from make food safety a top priority.

As a child in the strawberry fields, I never stopped to think about the safety of the berries I popped in my mouth straight from the vine. As school nutrition professionals, you don't have the luxury of ignorance-is-bliss confidence. Prevention of foodborne illness is one of your greatest responsibilities. According to the U.S. Centers for Disease Control and Prevention, there are an estimated 76 million cases of foodborne illness annually in the United States, resulting in 325,000 hospitalizations and 5,000 deaths. School nutrition operations must remain proactive and vigilant when it comes to maintaining food safety—especially in regard to farm-to-school procurement.

A large agricultural operation can rely on a number of individuals to manage various responsibilities, including designated experts for different areas, such as food safety. On a small farm, however, a relative handful of staffers take on all operational roles; just like many of you, they may wear numerous hats at one time! While most small farms have a well-earned reputation for producing safe, high-quality products, you can't rely on reputation alone. It's time to educate yourself on farm food safety, learning questions to ask, reasonable requirements to make and the red flags that should tell you to walk away. Protect your students by familiarizing yourself with recommended "Good Agricultural Practices" (GAPs).

Filling the GAP

GAPs are voluntary practices developed by the U.S. Food and Drug Administration (FDA) and USDA for fruit and vegetable growers. The goal of the GAP protocols is to improve the quality and safety of fresh produce by describing key steps that growers can and should use to help minimize contamination of produce by disease-causing microorganisms. These key steps provide a food safety blueprint for growers as they work to provide healthy, nutritious and safe fruits and vegetables for their consumers.

One example of an "umbrella" GAP is the development of a food safety plan that features a focus on GAPs regarding four primary areas of production and processing: soil, water, hands and surfaces. Application of a rigorous food safety plan—and proper care taken in each high-risk area—can reduce significantly the chance of foodborne pathogens being introduced to fruits and vegetables throughout their journey from farm to fork.

Let's take a look at how a GAP food safety plan developed by a farm operation should address each of the key areas.

Clean Soil. Proper use and care of the soil used to grow produce is necessary to prevent the spread of pathogens. While small amounts of illness-causing microorganisms always can be found in soil, the improper management and improper application of fertilizer can increase greatly these populations and, subsequently, increase the risk of contamination. Manure is one of the most common forms of fertilizer used on farms, and because it contains pathogens, your grower should take special precautions to ensure the safety of its use. The following practices will minimize food safety risks from soil:

- * Incorporate manure into the soil or use cover mulch after application to reduce the risk of physical contamination of the crops.
- * Compost the manure before application. High-temperature, aerobic composting can kill most harmful pathogens.
- * Apply manure to cover crops in the fall or at the end of the growing season. If applying manure in spring, apply at least two weeks before planting.
- * Provide a minimum of 120 days between manure application and the fruit or vegetable harvest.

Clean Water. Water used for irrigation, cooling, processing or cleaning equipment and facilities can be another potential source of contamination. On most farms, the water source likely will be municipal (tap) water, well water or surface water (ponds, streams or rivers). Municipal or well water tends to have the lowest risk for contamination; however, due to location and field size, these sources may not be feasible options.

Regardless of the source, your grower should know the quality of the water used. Awareness of water quality and safety will allow your grower to select irrigation practices designed to minimize the risks of spreading pathogens to produce. The following practices will minimize food safety risks from water:

- * Regularly sample water and send samples to a reputable laboratory for analysis. Depending on the source of the water, different testing frequencies are recommended. Municipal water: Acquire test results from the local water authority annually. Well water: Test biannually and treat the well if contamination is present. Surface water: Test quarterly in warm climates such as California, Florida, Texas and other southern states. Test three times during the growing season in northern climates such as New York, Pennsylvania and Michigan—first at planting, second at peak use and third at or near harvest.
- * Maintain records of all water-quality testing.
- * Use a drip irrigation system instead of sprinklers to help prevent any contamination from coming in contact with the produce or from splashing soil onto the crops.

Clean Hands. Food handlers involved in production and processing, such as those who bring in the harvest, play an important role in reducing the risks of contamination. They need to practice good personal hygiene to ensure the safety and quality of the foods grown and processed. Poor handwashing practices, unclean clothes or shoes and sick employees can compromise all other food safety practices on the farm. Growers can encourage good worker hygiene through proper training and continual efforts to raise and maintain the awareness of recommended food safety practices. The following practices will minimize food safety risks from hands:

- * Provide convenient, clean, well-maintained and -serviced restrooms in the field and in production facilities.
- * Supply liquid soap (in dispensers), potable water and single-use paper towels for handwashing. Make sure these are restocked regularly.

- * Emphasize the importance of restroom use and proper handwashing. Monitor and enforce the use of these facilities.
- * Reassign sick employees to duties that do not require direct contact with produce.
- * Provide training to help workers understand the relationship between food safety and personal hygiene.

Clean Surfaces. Fruits and vegetables will come into contact with many surfaces during their trip from the field through processing facilities, delivery and into your hands. Surfaces include harvesting equipment and containers, transport bins, cutting utensils, sorting and packaging tables and storage areas. Growers must be diligent in cleaning and sanitizing all these types of surfaces to reduce the risk of cross contamination of the produce. The following practices will minimize food safety risks from surfaces:

- * Keep soil and manure out of the processing facility and store these as far away as possible from growing and harvested items.
- * Separate spoiled or damaged produce items before processing.
- * Use plastic storage totes and bins that are easy to regularly clean and sanitize.
- * Wash, rinse and sanitize all equipment and food contact surfaces daily.
- * Consider including a sanitizer in produce rinse water to reduce bacterial contamination.
- * Develop and implement a plan for the regular cleaning and sanitizing of all storage and transportation areas.

It's also important that farmers develop and implement a plan to control animal contamination sources, including pets, wildlife, birds, insects and rodents.

There is no one-size-fits-all plan for food safety on the farm. The food safety plan implemented by each grower operation should be tailored to the specific crops it grows and the farm's management practices. That said, individual food safety plans should outline the specific GAPs that are applicable to the particular farm. When operations develop, implement and adhere to a comprehensive food safety plan, the process can greatly decrease the risk of foodborne illness. Remember, you only want to do business with a farm that is willing to make food safety its top priority!

Close the Communication Gap

There are a number of steps you can take to ensure that the farms you partner with use GAPs and make food safety a top priority.

Maintain close contact with your farmers. Start by making an initial visit to the farm before you agree to a contract. You may not know everything there is to know about farming, but as a school nutrition professional, you do know food safety. You will know if something doesn't seem right, especially if the farmer is unwilling to discuss the operation's food safety protocols or gives you ambiguous answers. Once you have developed your partnership, be sure to communicate frequently. Maintaining an open line of communication will allow you to voice your expectations.

Hold an annual farmer forum. Bring all of your farmers together once a year to discuss the achievements and challenges of the farm-to-school program. This allows farmers to share their best practices with one another and offers a great opportunity to provide GAP training.

Seek out farms with GAP certification. USDA's Agricultural Marketing Service, in partnership with state departments of agriculture, offers the Good Agricultural/Good Handling Practices (GAP/GHP) audit program. This is a voluntary, audit-based program that verifies compliance with good agricultural practices and good handling practices as outlined in the FDA's Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables. Participants that meet the requirements of the audit program receive a certificate and are listed on the USDA website.

A Cornell University food safety study found that 73.3% of consumers indicated they would pay extra for fruits and vegetables certified as being grown under safe farming practices. Though participation in the federal audit program is voluntary, a small farm may be willing to go through the certification, or at least additional training, in order to get your business and increase its customer base.

Include GAP requirements in your bids or purchasing agreements. Let the farm know up front what you expect. When you establish that you will only deal with farms that use strong food safety practices, farms should be more than willing to comply with GAP protocols. If a farm is resistant to the use of good agricultural practices, you may want to look elsewhere. Take it one step further and require a HACCP plan as part of the bid process. Use your farmers to help you comply with food safety regulations and save you the time of writing the plan yourself later.

Consider employing or designating a farm-to-school coordinator in your school nutrition operation. Depending on the size of your school nutrition department, the scope of your farm-to-school program and the number of farms your district works with, it may be worth hiring someone whose primary responsibility is managing this complex initiative! This coordinator can manage the program, visit farms, inspect operations, conduct food safety audits and provide GAP training as needed. If you cannot justify a dedicated full-time employee, consider assigning this project—allocating a few hours per week—to a manager or other staffer.

Pick Safety

“Going local” can be a fun new challenge for any school nutrition operation. The availability of fresh, local foods in the school cafeteria is sure to build excitement and interest among your student customers. Not every child has the opportunity to go to a U-pick strawberry farm, but you can bring the farm to them. But in bringing the farm to the school, be sure to uphold the strong food safety standards found everywhere else in your school nutrition program. Food safety is everyone's responsibility. SN

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