INTRODUCTION

During the past twenty years, consumer demand for locally produced food from small farms has steadily increased.\(^1\) This gradual shift in food preferences has generated numerous local food and small farm initiatives, including farm-to-school programs, Community Supported Agriculture (CSA), farmers markets, farm-to-table restaurants, grocers offering “Buy Fresh, Buy Local” promotions, and distribution companies like Mile High Organics providing delivery service of local and organic foods to consumer doorsteps.

Food safety and the prevention of food-borne illness are two of the biggest challenges facing small farmers as they work to meet the increasing demand for locally grown food. It is difficult to ensure that food remains free from contamination as it travels from farm to plate, especially given the rapid changes in food production and distribution methods, the high costs associated with food safety infrastructure and testing, consumer demand for food produced cheaply and quickly, and the advent of super-pathogens and antibiotic resistance. Unfortunately, food borne illness outbreaks have made headlines in the past few years,\(^2\) and the U.S. Centers for Disease Control and Prevention (CDC), estimate that every year, one in six Americans (48 million people) becomes sick from food borne diseases, with 3,000 dying.\(^3\)

However, where there is challenge, there is opportunity. The CDC reports that reducing food borne illness by just 10 percent would keep 5 million Americans from getting sick each year.\(^4\) The CDC has identified reducing food borne illness as a “Winnable Battle,” and has determined

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1. In recent years, sales from direct-market and small farms (i.e. farms with less than $50,000 in total farm sales) are steadily gaining ground. The USDA reports that direct-to-consumer marketing amounted to $1.2 billion in 2007, up from $551 million in 1997. The number of farmers’ markets rose to 5,274 in 2009, up from 2,756 in 1998, a 91.4 percent increase. See, Local Food Systems: Concepts, Impacts, and Issues, United States Department of Agriculture, Economic Research Service (May 2010.)


4. Id.
food safety to be a priority for improving public health. Additionally, food producers, university extension offices and state agencies have begun to play a larger role in developing farm food safety practices for small, local farms. Farm food safety refers to the procedures, standards and documentation methods used on the farm premises to prevent or reduce the risk of potential contamination in the fields and post-harvest production of produce. Safe food begins on the farm.

The Colorado Farm to School Task Force commissioned this report to investigate the variety of approaches that states are using to address farm food safety. The report reflects the findings of a 50-state survey of farm food safety initiatives, demonstrating the diversity and creativity driving farm food safety initiatives across the nation.

WHY STATE-LEVEL FOOD SAFETY PROGRAMS MATTER

Recent outbreaks of food-borne illnesses forced Congress to take a hard look at America’s food safety regulations. In an effort to create a safer food supply, Congress passed the Food Safety Modernization Act (FSMA) on Jan. 4, 2011. FSMA amends the Federal Food, Drug and Cosmetic Act to improve food safety regulation by giving the Food and Drug Administration (FDA) new tools to manage domestic and imported foods. Many FSMA requirements will be fleshed out through new guidance documents and regulations, which the FDA is currently publishing for public comment and review. In short, FSMA requires farmers to follow farm food safety plans and hazard analysis, undergo periodic food safety audits, and maintain good agricultural practices (GAP) and good handling practices (GHP) to prevent food-borne illnesses.

FSMA does not cover all farms, so states have stepped in to fill certain food safety gaps. As FSMA was negotiated by Congress, many small farm advocates argued that small, direct market farms would fail if they were forced to assume the time and cost burdens associated with increased safety requirements. To resolve this issue, the Tester-Hagan amendment was added to exempt most small, local and direct market farms from many of the FSMA food safety requirements. Senator Tester reasoned that because most small farms were already in a precarious economic position, the FDA should not unduly regulate and burden small farmers,
and unintentionally drive them out of business.\textsuperscript{11} Instead, the amendment exempts from FSMA those producers who:

- Direct market more than 50 percent of their products to consumers, stores or restaurants
- Have direct and non-direct combined gross sales of less than $500,000
- Sell to consumers, stores or restaurants that are in-state or within 275 miles of their farms
- Provide their customers with their name, address and contact information.

Because the FSMA excludes most small or direct market farms from many of the federal farm food safety regulations, individual states are continuing to monitor and develop food safety protocols to protect consumers from food-borne illnesses. This report investigates the current status of state-based food safety protocols to assist state agencies, university extension agents and farmers as they move forward with food safety plans for small farmers exempt from FSMA regulations.

**NATIONAL TRENDS IN FARM FOOD SAFETY**

This report sorts state-level food safety initiatives into different categories, or trends. This section provides a brief overview of states participating in identified food safety trends discussed more thoroughly in the body of the report:

**Third Party Audits** - All states offer third-party audit programs in which a federal, state, extension office or private auditor examines whether farm activities comply with accepted food safety standards. States operate through either a state/federal partnership, a state/university extension partnership, a state/private company partnership, or a state/producer partnership. (See pages 4-7 for more on third-party audits.)

**State Marketing Agreements** - A marketing agreement is a legal contract between a state agency and a group of producers. Marketing agreements are voluntary initiated by producers to help solve certain industry problems and provide stability in the market. In the event of a food product safety outbreak (i.e. leafy greens, strawberries, cantaloupe), the industry may initiate a marketing agreement to ensure quality and safety of future products. Although federal marketing agreements are commonplace, state-level marketing agreements are rare. At this point, only Arizona, California and Ohio have initiated marketing agreements with different commodity sectors. (See pages 7-9 for more on marketing agreements.)

**State Food Safety Statutes** - Florida, Maryland and North Dakota have statutes addressing farm food safety standards. Additionally, Hawaii has pending farm food safety legislation in the 2012 legislative session. This report does not cover raw milk statutes as they are outside its scope. (See pages 9-11 for more on state food safety statutes.)

\textsuperscript{11} See, Senator Jon Tester homepage, http://tester.senate.gov/Legislation/foodsafety.cfm
Commodity Specific Food Safety Standards - California, Georgia, North Carolina and Texas have implemented safety standards for specific commodities. For purposes of this toolkit, commodities reflect certain agricultural products, including almonds, avocados, tomatoes, peaches, tobacco and pecans. (*See pages 11-12 for more on commodity specific food safety standards.*)

Farm Food Safety Information Hubs and Guidance Documents - All states offer some sort of web-based or published information hub for growers. This report sorts information and resources into the following categories: farm to school and school garden resources, audit preparation information, general food safety guidance and information geared toward small farms. This report does not cover all state food safety information hubs; instead, it highlights states that have developed more comprehensive or unique information hub techniques. (*See pages 12-18 for more on information and guidance resources.*)

Hands-on Education - This report reviews hands-on food safety trainings and education opportunities in 34 states. Hands-on trainings are divided into farm-to-school training, audit training, one-on-one training, general training, webinars and on-line classes, and trainings for small and beginning farmers. (*See pages 18-25 for more on hands-on education programs.*)

Funding and Cost-Sharing Programs - Finally, the report discusses 13 states with programs that help farmers with the costs of improving farm food safety and meeting audit standards: Alabama, Arizona, Arkansas, Massachusetts, New York, North Carolina, Oregon, Pennsylvania, Tennessee, Texas, Vermont, West Virginia and Wisconsin. (*See pages 25-27 for more on funding and cost-sharing.*)

THIRD-PARTY AUDIT PROGRAMS

Third-party farm food safety audits are systematic and independent examinations of farm practices and processes used to determine whether farm activities comply with accepted food safety standards. This section describes the four types of third-party audit programs used by states. All four audit programs involve a formal partnership between a state agency and another entity or government agency.

1. State/Federal Audits - Thirty-three state departments of agriculture participate in the collaborative state/federal USDA Fresh Fruit and Vegetable Audit Verification Program. This program allows state departments of agriculture to partner with the USDA’s Agricultural Marketing Service (AMS) Fresh Products Division to perform farm audits and verify food safety practices based on the FDA’s *Guide to Minimize Microbial Food Safety*

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12 See, Michigan State University, *Food Safety Knowledge Network*, available at http://foodsafetyknowledge network.org
Hazards for Fresh Fruits and Vegetables\textsuperscript{14} and the USDA’s Good Agriculture Practices/Good Handling Practices (GAP/GHP) Food Safety Standards. \textsuperscript{15}

The goal of the state/federal audit program is to create a unified food safety standard across the nation. The program assesses farm efforts to minimize the risk of contamination of fresh fruits, vegetables and nuts by microbial pathogens. The program verifies that the participant has taken proactive measures to reduce the risk of contamination by adhering to generally recognized GAP/GHP best practices.

The federal government takes on the role of licensing state auditors and establishing uniform food safety guidelines, while the state agency provides auditors and direct contact and assistance to farms. The audit program is voluntary and is only performed at the request of the farmer. Cost is $92 per hour, including travel time, for each audit or audit-related visit. The audit is valid for one year.

2. State/University Cooperative Extension Audits - Some state university cooperative extension offices partner with state governments to spearhead food safety audit programs.

**Arizona** - The Arizona Department of Agriculture’s (ADA) Agricultural Consultation and Training Program and the University of Arizona’s Cooperative Extension Service offer [GHP/GAP Training and Certification Cost-Share Program for Food Safety in Arizona](http://www.azda.gov/ACT/ghpgap.htm). The free two-day program focuses on certification of food safety practices. After completing the free GHP/GAP training, a farmer can apply for cost-share funds to go through the ADA audit process to be certified for one year under the GHP/GAP certification. The cost-share program is designed to help defray some of the costs related to a successful audit and growers are eligible for 75 percent reimbursement. \textsuperscript{16}

**Kentucky** - The [Kentucky GAPs Training Program\textsuperscript{17}](http://www.kyagr.com/marketing/GAP.htm) is a partnership between the Kentucky Department of Agriculture (KDA), the University of Kentucky Cooperative Extension Service and the Kentucky Department for Public Health. It is a three-step program:

1) **Education**: Cooperative Extension agents present a GAP curriculum to local producers on food safety best practices. Upon completion of this class farmers receive a certificate issued by the KDA.

2) **Completion of a self-audit**: The producer reviews his/her own operation and identifies possible deficiencies in production practices and makes necessary adjustments.


\textsuperscript{17} Kentucky Dept. of Agriculture, GAP Program, http://www.kyagr.com/marketing/GAP.htm.
3) **GAP certification and third-party audits**: After completion of the self-audit, producers may opt for a third-party audit. The KDA offers a **cost share program** for those who have completed the full training program.

**New Jersey** - The [Rutgers New Jersey Agriculture Experimental Station Food Safety Program](http://njaes.rutgers.edu/foodsafety/food-safety-practices.asp) is collaboration between Rutgers Cooperative Extension and the New Jersey Department of Agriculture (NJDA) to offer a statewide third-party audit system using USDA’s GAP and GHP Audit Verification Program’s standards. Growers develop their own food safety plans to address hazards on their farms. Once growers do a self-evaluation and modify their food safety plans as needed, Rutgers works with them to review their food safety plans and facilities prior to the third-party audit. Once the audit is successfully completed, the grower receives a certificate.

**Rhode Island** - [Rhode Island’s Good Agricultural Practices Grower Certification Program](http://www.uri.edu/ce/ceec/pdfs/GAP_guidelines.pdf) is a joint effort of the Division of Agriculture, Rhode Island Department of Environmental Management, the University of Rhode Island Cooperative Extension Food Safety Education Program and Rhode Island growers. This voluntary program trains growers and their workers on the application of GAP food safety principles. A staff person from the Rhode Island Division of Agriculture visits the farm for a review of GAP practices. After a successful audit, the grower will be certified as a “Rhode Island GAP Grower.”

**New England Extension Food Safety Consortium** - The University of Rhode Island and University of Connecticut’s Cooperative Extension programs are participating in the [New England Regional GAP Project](http://www.hort.uconn.edu/ipm/foodsafety/index.htm). The project is a voluntary GAP audit program, open to farmers from Connecticut and Rhode Island. After the farmer reads the GAP fact sheets and has implemented GAP practices, the cooperative extension service sends a staff member to perform an audit of the operation. If the farm is in compliance with the GAP standard, it will receive a placard to post that indicates participation in the voluntary audit program. [Link to audit form](http://www.hort.uconn.edu/ipm/foodsafety/rifarmaudit.htm).

3. **State/Private Company Audits** - Many states partner with private third-party auditing companies, e.g. PrimusLabs, to conduct audits on farms. In a state/private company partnership audit, state department of agriculture employees are trained by the private company to become third-party auditors. Auditors must adhere to private food safety licensing standards. Hawaii, Idaho, and Tennessee all contract with PrimusLabs to perform farm safety audits.
   - The [Hawaii Department of Agriculture Commodities Branch Food Certification Service](http://hawaii.gov/hdoa/qad/comm.), the [Idaho State Department of Agriculture Inspection Services](http://www.hort.uconn.edu/ipm/foodsafety/index.htm), and the

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Tennessee Department of Agriculture\textsuperscript{24} provide a service-for-fee to farms to perform PrimusLabs GAP audits. The PrimusLabs GAP program addresses the food safety topics of site selection, adjacent land use, fertilizer usage, water sourcing and usage, pest control and pesticide monitoring, harvesting practices and food defense.\textsuperscript{25}

4. **State/Producer Initiated Audits** - The final audit type is illustrated by the Georgia GAP Food Safety Program and Massachusetts Commonwealth Quality Brand.

**Georgia** - The Georgia Fruits and Vegetables Growers’ Association (GFVGA) partnered with the Georgia Department of Agriculture, University of Georgia and the Georgia Crop Improvement Association to establish the Georgia GAP Food Safety Program. The Program verifies that GAPs were followed during production, packing and shipping. Audits are performed by the independent third-party Agricultural Audits, LLC.\textsuperscript{26}

**Massachusetts** - Commonwealth Quality is a brand designed by the Massachusetts Department of Agricultural Resources to identify locally sourced products that are grown, harvested and processed in Massachusetts. Commonwealth Quality requires that farmers comply with the USDA GAPs program or another third-party auditor using the FDA’s food safety guidelines. Massachusetts farmers can also fulfill the food safety requirement by completing the University of Massachusetts GAPs session(s) and employing food safety practices identified in the Best Management Practices (BMPs) GAPs checklist developed by the University of Massachusetts Extension Service.\textsuperscript{27}

### STATE MARKETING AGREEMENTS

A marketing agreement is a legal contract between a state agency and a group of producers that records the rights, duties, and obligations of the producers. Marketing agreements are voluntary and initiated by producers to help solve certain industry problems and provide stability in the market for specific farm products. When there has been a food safety outbreak for a certain product (i.e. leafy greens, strawberries, cantaloupe), the industry may initiate a marketing agreement to help ensure the quality and safety of future products.

Producers work with the state’s department of agriculture to develop the terms of a marketing agreement, set food safety standards and tailor the marketing agreement to the producers’


\textsuperscript{26} Georgia GAP Food Safety Program, http://gfvga.org/GAGAP/ga-gap-program/.

\textsuperscript{27} Commonwealth Quality, Food Safety Requirements, http://www.mass.gov/agr/cqp/sectors/produce/food-safety-requirements.htm
specific needs. If a member-producer breaches the marketing agreement, their membership may be terminated and they may be liable for damages.

The following states have industry-initiated marketing agreements to help ensure food safety standards of the products.

**Arizona** - The *Arizona Leafy Greens Products Shipper Marketing Agreement* has a Safety Committee that develops farm food safety standards for leafy greens and oversees its voluntary audit program that certifies producers who meet safety requirements. The safety standards are designed to meet or exceed federal food safety guidelines.

- Members of the marketing agreement are subject to unannounced farm safety audits to ensure compliance with food safety guidelines.
- Farms that pass the audit receive an “Arizona Leafy Greens Food Safety Service Mark” and qualify for Arizona Leafy Greens membership.
- Membership in the marketing agreement is voluntary, but once members sign on they are required to be in 100 percent compliance with all food safety practices. The program has a 96 percent industry participation rate.

**California** - The *California Leafy Green Products Handler Marketing Agreement* (LGMA) is similar to the Arizona Leafy Greens program to verify that farmers follow a set of food safety practices for lettuce, spinach and other leafy greens.

- The California Department of Food and Agriculture oversees the LGMA and collaborates with the California Leafy Green Advisory Board to verify that farms are in compliance with food safety requirements.
- To receive LGMA certification and membership, farms are subject to random farm food safety audits at least four times per year.
- The LGMA “Service Mark” assures buyers the product was grown according to LGMA-accepted food safety practices.
- Membership in the LGMA is voluntary, but once members sign on they are required to be in 100 percent compliance with all LGMA food safety practices. Members who fail to comply are decertified from the program and their names are available to the public.
- Currently, the LGMA represents member companies that produce approximately 99 percent of all leafy greens produced in California.

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California Cantaloupe Program

- In response to the Colorado cantaloupe *Listeria* outbreak in 2011, the California Cantaloupe Program, a marketing agreement for California cantaloupes, approved the development of new *farm safety standards* for cantaloupe production.\(^{31}\)
- The marketing agreement is in the process of being amended to include a mandatory food safety certification program. The program will require government inspection of cantaloupe producers against a set of production and handling metrics. Noncompliance will constitute unfair trade practice.\(^{32}\)

Ohio - The *Ohio Fresh Produce Marketing Agreement (OPMA)* requires food safety standards for fresh produce and provides a voluntary food safety and certification audit that evaluates producers and marketers based on their size of operation, i.e. direct market farms and roadside stands, intra- or inter-state sales, and national sales).\(^{33}\)

- There are four core standards to the marketing agreement: 1) Water Quality, 2) Composting, 3) Product Traceability, and 4) Good Handling Practices.
- OPMA is different than other marketing agreements because it covers a broad range of fresh products instead of just one commodity.
- OPMA is currently in the process of obtaining formal authority as a Marketing Agreement through the Ohio Department of Agriculture.

### STATE STATUTES GOVERNING FOOD SAFETY

Only a handful of states have passed laws to govern farm food safety standards. These statutes create systematic programs to educate producers and promote uniform state standards for farm food safety practices. State government or a statewide producer coalition typically sponsors these efforts. The following section is an overview of state food safety legislation.

**Florida** - In Florida, tomato farmers lobbied the state legislature to implement mandatory *tomato best practices*\(^{34}\) that require the Florida Department of Agriculture to inspect tomato farms and packing facilities to ensure compliance with food safety practices. The law allows the Florida Department of Agriculture to establish food safety standards for tomatoes so long as the standards are based on federal requirements, available scientific research, generally accepted industry practices or recommendations of food safety professionals. Food safety


\(^{33}\) Ohio Produce Marketing Agreement, [http://opma.us/](http://opma.us/). See also, OPMA, Tier Approach, [http://opma.us/three_tier_system](http://opma.us/three_tier_system).

standards apply to “producing, harvesting, packing, and repacking of tomatoes for sale for human consumption by a tomato farm, tomato greenhouse, or tomato packinghouse or repacker.”35 Costs incurred to the Florida Department of Agriculture are reimbursed by the tomato industry.

- **Exemptions** - Small and direct market farms are generally exempt from the tomato food safety standard. Tomato farms will be exempt if: (1) Tomatoes are sold by a grower to a consumer on the premises on which they are grown, not to exceed two twenty-five pound boxes per customer; (2) Tomatoes are grown on premises and sold by the individual grower at a local farmers market, not to exceed two twenty-five pound boxes per customer; or (3) Tomatoes are part of a charitable contribution.36

**Hawaii** - **Hawaii Produce Traceability Initiative** - In 2009 the State of Hawaii Department of Agriculture and the Hawaii Farm Bureau partnered to deploy a three-year pilot RFID (radio frequency identification) initiative. The Hawaii Produce Traceability initiative uses RFID inlays to track and trace fresh produce throughout the state’s food supply chain. This traceability initiative was designed to promote food safety by providing product visibility down to the farm or even field level.

- **Exemptions**: Farms are exempt if 1) they sell their products directly to buyer/consumers via a farm stand, farmers market or through home delivery or 2) if the farm delivers its product directly to a store or restaurant and it is used only in that location (i.e., it is not further distributed).37

**Maryland** - The Farm Food Safety Act, [Senate Bill 142 (2012)](http://mlis.state.md.us/2012rs/chapters_noln/Ch_32_sb0142T.pdf), was passed in April 2012. This law authorizes the state Secretary of Agriculture to certify farm products to a conforming food safety standard that includes FDA standards.38 The bill allows the Secretary to examine the practices used in the production of a product. The Secretary also has authority to revoke or suspend a certificate of farm safety compliance for failure to meet regulations.39

**North Dakota** - The North Dakota Seed Potato Certification Standards certify the quality and safety of seed potatoes under a voluntary audit program.40 The state’s Seed Department is authorized to work with North Dakota’s seed industry and provide voluntary GAP and GHP audit certification services for processing and table stock potatoes.

**Hawaii (pending law)** - The Hawaii State Legislature is currently considering [Senate Bill No. 2636](http://www.capitol.hawaii.gov/session2012/bills/SB2636_.HTM) to establish a statewide GAP program.41 The objectives of the Hawaii GAP program would be to: 1) Develop science and risk-based GAPs that reduce the potential for farm food-borne illness risks; 2) Develop and implement programs to educate and train Hawaii's farmers to implement

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35 FLA. STAT. ANN. § 500.70 (2011).
38 Maryland, S.B. 142, [http://mlis.state.md.us/2012rs/chapters_noln/Ch_32_sb0142T.pdf](http://mlis.state.md.us/2012rs/chapters_noln/Ch_32_sb0142T.pdf).
39 Id.
farm GAPs; 3) Provide procedures for voluntary verification of the implementation of GAPs; and 4) Develop a consumer information program to teach consumers about the proper treatment and handling of fresh and processed agricultural food products.

**COMMODITY-SPECIFIC FOOD SAFETY STANDARDS**

Commodity-specific food safety standards only apply to specific commodities grown in the state. The state works with growers’ associations to develop and implement safety standards that are tailored to a particular commodity and meet the needs of growers.

**California**
- **Almond Board of California - Food Quality and Safety Program**[^42] - This document provides guidelines to California almond growers on GAP practices to minimize potential hazards during production and recognize and address sources of potential contamination. The Almond Board of California’s Food Quality and Safety Program was developed in response to almond-associated outbreaks of *Salmonella* and detection of *Salmonella* in several orchard floor surveys.
- **California Avocado Commission’s (CAC) GAP Program**[^43] - The Commission began development of an avocado specific set of GAP procedures built on USDA standards in late 2010. In August 2011, the Board approved the CAC-GAP and CAC-GHP programs, which provide voluntary, uniform guidelines for California avocado growers.
- **California Tomato Farmers (CTF)**[^44] This is a cooperative comprised of six family-owned farming businesses producing 87 percent of all fresh tomatoes in California.
  - CTF member farms are subject to mandatory and regular farm audits conducted by California Department of Food and Agriculture (CDFA) inspectors. Audits are announced and unannounced and inspect fields and packinghouses. The audit reports are posted online for customers to view.
  - CTF members must attend education classes on the science of food safety and develop farm food safety assessments.
  - CTF customers have online access to a member’s audit history and if there is a compliance issue, CTF emails customers with the report.

**Georgia** - The University of Georgia Extension Service produced **GAPs for the Production and Handling of Peaches**[^45] to address food safety issues in the peach industry. The document offers farm food safety advice on field sanitation, harvest and packing facilities.

[^42]: Almond Board of California, GAPs program, [http://www.almondboard.com/Growers/GAPS/Pages/default.aspx](http://www.almondboard.com/Growers/GAPS/Pages/default.aspx).
North Carolina - The North Carolina Department of Agriculture and Consumer Services led a tobacco industry roundtable discussion on farm product safety practices. The result of the roundtable is the North Carolina GAPs for Tobacco, a guidance document created to educate tobacco growers on GAP and give purchasers confidence that tobacco is being grown using safety standards developed collaboratively by the state and the industry.

Texas - The Good Agricultural Practices for Pecans in Texas was created by Texas A&M Cooperative Extension in association with the Texas Pecan Growers Association. This document offers advice to farmers on storage, cleaning, pesticide use, orchard sanitation and worker hygiene.

INFORMATION HUBS AND GUIDANCE DOCUMENTS

Almost every state has a web-based and/or published information hub that provides guidance documents to farmers interested in farm food safety. Usually this information is produced by the state department of agriculture or the university extension office. Oftentimes, nonprofit and commodity interest groups will provide research and documentation for these sites. For brevity purposes, the following list does not include all farm food safety information sites, but highlights select resources that reflect best practices.

School Garden and Farm to School Food Safety

Alaska - Alaska School Garden Food Safety Guidelines was developed by the Alaska Department of Natural Resources, Division of Agriculture, Inspection Services and Farm to School Program. It was created in response to the need for food safety guidance in the school garden setting. The Alaska School Garden Guidelines are adapted from USDA's GAP Audit Checklist and includes:

- Product quality assurance guidelines addressing personal hygiene, soil treatment, water and irrigation, harvest and preparation
- Weekly checklists on school garden safety
- Links to GAP and GHP self-assessments
- Contact information to receive assistance on food safety and farm to school

Kansas - Kansas Farm To School Food Safety, sponsored by the Kansas Department of Education, is a web portal with extensive resources regarding school requirements for farm food safety. Includes bid documents, HACCP guidance, food safety checklist, etc.

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Michigan - The [Michigan Farm to School: Marketing Michigan Products, a Step-by-Step Guide](http://www.mifarmtoschool.msu.edu/assets/farmToSchool/docs/Marketing_STEP1_Addressing_Food_Safety.pdf) is a handbook for local producers about farm food safety that includes information about GAP/GHPs, other third-party audits and record keeping.  

Minnesota - The University of Minnesota Extension Program provides a [farm-to-school food safety toolkit](http://www.extension.umn.edu/farm-to-school/toolkit/food-safety.html) about farm food safety practices so that food service personnel can talk with farmers about safe food practices before purchasing fresh fruits and vegetables.  

Montana - The [Montana State University Procurement Standards](http://www.montana.edu/ufs/mtmade/images/MSU%20Procurement%20Standards.pdf) offers a basic summary of GAP practices and a variety of sample logs for producers to implement. This document is geared toward both the university procurement office and producers.  

New Hampshire - The [Farm to School Program](http://www.nhfarmtoschool.org/resources/Ag_gen/) is a web portal of resources from the University of New Hampshire for farm to school initiatives, including GAPs and farm food safety.  

Washington - [Washington Farm To School Risk Management and Food Safety Web Resources](http://www.wafarmtoschool.org/Page/16/GAPs-good-agricultural-practices-food-safety-certification) provides information on GAPs, product liability insurance and a direct marketing handbook for farmers selling to schools.  

### Audit Preparation Information and GHP/GAP Information  

Arizona - The [University of Arizona Fresh Produce Safety Web Portal](http://cals.arizona.edu/fps/) provides “all the information you need to grow produce safely at home or commercially.” The site targets both home and professional growers. The Learning Center offers facts, lesson plans and activities on food safety.  

Idaho - The [University of Idaho Potato GAP Audit Organizational Manual](http://www.kimberly.uidaho.edu/potatoes/gap.htm) helps farmers coordinate their current standard operating procedures for food and farm safety with the formal requirements of the USDA GAP Audit Checklist. This manual was designed to simplify the necessary requirements to successfully pass the USDA GAP Audit.  

Kansas - [Kansas Food*A*Syst](http://cals.arizona.edu/fps/) - Kansas State University’s Agricultural Experiment Station and Cooperative Extension Service created this confidential, self-assessment program that farmers can use to evaluate the food safety risks in growing and processing foods that will be directly

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53 NH Farm to School Program, Resources, http://www.nhfarmtoschool.org/resources/Ag_gen/.  
55 University of Arizona, Fresh Produce Safety, http://cals.arizona.edu/fps/.  
marketed to the public. It includes a “Mini-Checklist” in its introduction designed to highlight areas of concern in food production.\(^\text{57}\)

**Maine** - The [University of Maine Cooperative Extension Potato Program](http://www.umaine.edu/umext/potatoprogram/gap_good_agricultural_practices.htm) provides information on potato production and Good Agricultural Practices Information.\(^\text{58}\) The [“Grower Manual for Documentation for a USDA GAP audit”](http://www.ksre.ksu.edu/library/fnr2/foodasyst/foodasysbook.pdf) offers charts and logs for farm safety plans under this program.\(^\text{59}\)

**Maryland** - The Joint Institute for Food Safety and Applied Nutrition, a collaborative effort between the FDA and University of Maryland, is organizing training programs on GAPs for the safe production of fresh fruits and vegetables. It offers a [comprehensive GAPs manual](http://www.umaine.edu/umext/potatoprogram/Fact%20Sheets/11.09%20documentation%20General%20Questions.pdf), among other resources.\(^\text{60}\)

**Michigan** - The [Michigan Farm and Food Safety Organization](http://www.mifarmfoodsafety.org/) website offers growers resources to successfully complete the GAP process. This site is a collection of resources and tools from partners all across Michigan invested in farm food safety education.\(^\text{61}\)

**Nebraska** - The University of Nebraska-Lincoln Extension Office offers a [Good Agricultural Practices for Food Safety of Fresh Produce](http://www.ianrpubs.unl.edu/pages/publicationD.jsp?publicationId=1294) guide. This is a condensed food safety checklist of practices and conditions to reduce the potential for fresh produce contamination.\(^\text{62}\)

**New Mexico** - [GAPs Program for New Mexico](http://aces.nmsu.edu/ces/foodtech/gap-nm.html) is a webpage developed by the New Mexico State University Extension to provide educational materials to agricultural food producers and educational professionals to reduce microbial risks in fruits and vegetables.\(^\text{63}\)

**New York** - [The National Good Agricultural Practices Program at Cornell](http://www.jifsan.umd.edu/training/gaps_manual.php) is a leading resource nationwide for GAPs awareness and educational resources. The website includes guide books and worksheets on all aspects of production. One seminal publication is [Food Safety Begins on the Farm](http://www.jifsan.umd.edu/training/gaps_manual.php). \(^\text{64}\)

**Oregon** - The [Oregon Department of Agriculture Agricultural Development and Marketing Division Resource Hub](http://www.oregonfarm.com/), offers basic information, contact for trainings, and links to online

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58 University of Maine Cooperative Extension Potato Program, GAPs, [http://www.umaine.edu/umext/potatoprogram/gap_good_agricultural_practices.htm](http://www.umaine.edu/umext/potatoprogram/gap_good_agricultural_practices.htm).


62 University of Nebraska, GAPs for Food Safety of Fresh Produce, [http://www.ianrpubs.unl.edu/pages/publicationD.jsp?publicationId=1294](http://www.ianrpubs.unl.edu/pages/publicationD.jsp?publicationId=1294).

63 New Mexico State University, GAPs Program, [http://aces.nmsu.edu/ces/foodtech/gap-nm.html](http://aces.nmsu.edu/ces/foodtech/gap-nm.html).
resources on food safety. This includes a GAPs Practices Manual with audit questions about fundamental GAP areas for self-study and a sample farm safety plan.\(^{64}\)

**Rhode Island** - The Rhode Island Food Safety Education web portal provides farm food safety resources from the Cooperative Extension at the University of Rhode Island. Resources include a GAP Grower Certification Program, GAP Guidelines, and basic fact sheets on farm food safety.\(^{65}\)

**South Carolina** - The Clemson University Sustainable Agriculture Program provides links and resources about GAP, how to pass the audit process and how to conduct a self-audit.\(^{66}\) The GAP Plan Builder was launched in April 2012 by the Clemson University Extension. The Plan Builder is a survey tool designed to solicit answers to the most common pieces of operational information required in a Farm Food Safety Plan. Information entered through this program will be formatted into a Farm Food Safety Plan template that may then be saved online and printed as needed.\(^{67}\)

**Pennsylvania** - The Penn State Extension Farm Food Safety web portal provides information on food safety challenges. The site highlights GAPs, how Pennsylvania farming practices compare with nationwide GAP standards and guidance on writing food safety plans.\(^{68}\)

**Vermont** - Here Comes GAP Certification!, produced by the University of Vermont Extension Service, provides a how-to on GAP certification by providing a real life case study and the GAP application of a Vermont farmer seeking USDA GAP certification.\(^{69}\)

**Wisconsin** - The On-Farm Food Safety for Fresh Fruit and Vegetable Growers is a food safety web tool designed to assist Wisconsin fresh fruit and vegetable growers by providing resources and information on food safety plans, certifications and audits, GAP/GHP programs and training programs for extension workers.\(^{70}\)

### General Farm Food Safety Information

**Arizona** - The University of Arizona Western Vegetable Quality Web Portal is a cooperative extension service hosting GAPs information, a newsletter, FAQs and other food safety resources.\(^{71}\)

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\(^{65}\) University of Rhode Island, Food Safety Education, [http://www.uri.edu/ce/ceec/food/grow.html](http://www.uri.edu/ce/ceec/food/grow.html).

\(^{66}\) Clemson University GAP and GHP Training Materials, [http://www.clemson.edu/sustainableag/GAP_info.html](http://www.clemson.edu/sustainableag/GAP_info.html).

\(^{67}\) Clemson University, Food Safety Plan, [http://cufan.clemson.edu/GAP/](http://cufan.clemson.edu/GAP/).

\(^{68}\) Penn State Extension, Farm Food Safety, [http://extension.psu.edu/food-safety/farm](http://extension.psu.edu/food-safety/farm).

\(^{69}\) University of Vermont Extension, Here Comes GAP Certification!, [http://www.uvm.edu/vtvegandberry/GAPS/HarlowFarmGAPSCaseStudy.pdf](http://www.uvm.edu/vtvegandberry/GAPS/HarlowFarmGAPSCaseStudy.pdf).


\(^{71}\) University of Arizona, Western Vegetable Quality, [http://cals.arizona.edu/crops/vegetables/quality/index.html](http://cals.arizona.edu/crops/vegetables/quality/index.html).
California - University of California Davis Good Agricultural Practices Website - This website lists links to presentations, publications, and other websites with information related to the production, harvest and processing of foods. The resources emphasize microbial food safety, but also consider biotechnology, food quality and food security.72

Colorado - Colorado Farm to Table Food Safety Web Portal - The Colorado Department of Agriculture and Colorado State University Extension collaborated to develop materials for food producers. In addition to food safety webinars, the site contains fact sheets on food safety for farmers market vendors, a guide for preparing and offering food samples, E. coli prevention, safe food facts for community gardens and a USDA audit checklist.73

Connecticut - Safe Food in Connecticut is a web portal hosted by the University of Connecticut, College of Agriculture and Natural Resources, and the Cooperative Extension System to provide food safety training, education and information to consumers, farmers, food processors and food service providers.74

Hawaii - The Farm Food Safety Web Portal is maintained by the Hawaii Department of Agriculture. It includes daily news on food safety, product recall information, information on the economics of food safety, links to important federal and state food safety regulations, and general information on safer farming practices.75

Iowa - Food Safety From Farm to Table is a resource for issues relating to food safety from the Iowa State University Extension.76 The site includes HAACP help, food safety trainings, information on the Iowa Food Safety Task Force, information on specific pathogens and other food safety related resources. This is one of the most comprehensive food safety information hubs on the web. Additionally, the Iowa State University Extension Food Safety Guidelines is a web hub for farm food safety resources, including GHP/GAP, farm cleaning and sanitizing guide.77

Massachusetts - The Massachusetts Partnership for Food Safety Education represents more than 5,000 food and regulatory members who serve and support consumers, regulators and food workers in food production, processing, food service and retail establishments. Its goal is to reduce food-borne illness in Massachusetts by improving food safety knowledge and skills. Its web hub links to a large variety of information about food safety, including farm food safety.78

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73 Colorado State University Extension, Farm to Table Food Safety, http://farmtotable.colostate.edu/grow.php
New Hampshire - The Manual of Best Management Practices for Agriculture in New Hampshire was developed by the New Hampshire Department of Agriculture, Markets and Food to address farm safety practices, specifically those involving compost, fertilizer, and manure.  

New Mexico and Hawaii - is a Commercial On-Farm Food Safety Practices website developed with the help of university faculty in Hawaii and New Mexico. It provides farmers with information and tools that can help reduce the chance of farm food contamination, i.e. techniques to keep water and soil clean, worker hygiene and product trace back.

New York - Cornell University Cooperative Extension provides numerous educational publications and videos, some in Spanish and Hmong languages, to assist farmers with farm food safety. Publications include: Food Safety Begins on the Farm: A Grower’s Guide; Fruits, Vegetables, and Food Safety: Health and Hygiene on the Farm; Food Safety Begins on the Farm: A Grower Self Assessment of Food Safety Risks; Farm and Packinghouse Record Keeping Sheets; Field Hygiene Posters.

North Carolina - The NC Market Ready: Fresh Produce Safety Portal focuses on fresh produce safety. The site offers a variety of food safety resources and materials, including information on traceability, post-harvest quality, cost share opportunities, GAPs and webinar offerings.

Pennsylvania - The Pennsylvania Department of Agriculture Bureau of Food Safety and Laboratory Services contains information on food safety legislation, application information for licensing, and resources for specific food safety programs, including GAPs.

Information Geared Toward Small Producers

California - The University of California Davis Small Farm Program develops field and marketing research aimed at the needs of small- and moderate-scale farmers, and provides that information to farmers who are often not reached by traditional extension programs. It publishes the California Small Farm Food Safety Manual.

Colorado - The Colorado Farm to Market web portal is aimed at educating Colorado producers on federal, state and local regulations, licensing and food safety requirements for all stages of food production and distribution. The site is a collaborative effort between the Colorado

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80 New Mexico State University and University of Hawaii at Manoa, Commercial On-Farm Food Safety Practices, http://gaps.nmsu.edu/.
81 Cornell University, GAPs Practice Program, http://www.gaps.cornell.edu/Educationalmaterials/GAPsFlyer.pdf.
82 North Carolina State University, Fresh Produce Safety Portal, http://ncsu.edu/enterprises/ncfreshproducesafety/about/.
83 Pennsylvania Dept. of Agriculture, Bureau of Food Safety and Laboratory Services, http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_24476_10297_0_43/agwebsite/OrganizationDetail.aspx?name=Bureau-Of-Food-Safety-and-Laboratory-Services&navid=34&parentnavid=0&orgid=13&.
85 Colorado Farm to Market, http://cofarmingtomarket.com./
Department of Agriculture, Colorado State University Extension and Colorado Farmers’ Market Association.

**Massachusetts** - The [Community Involved in Sustaining Agriculture](http://buylocalfood.org/page.php?id=572) is a web hub providing information about farm food safety, audits, and food safety legislation. It is maintained by a local agriculture advocacy organization.\(^86\)

**Michigan** - The [Michigan Farmer’s Market Association Food Safety Web Hub](http://mifma.s434.sureserver.com/resources/helpful-links/mifma-on-farm-food-safety-resources/) is a collection of farm food safety resources that provides dates and food safety trainings offered to direct market producers.\(^87\)

**Virginia** - [U-Picks and Good Agricultural Practices](http://pubs.ext.vt.edu/2906/2906-1348/2906-1348_pdf.pdf) is a one-page GAP resource from Virginia Tech University Cooperative Extension for “U-pick operations.”\(^88\)

**Washington** - The [Bridging the GAPs Program](http://www.cfaitc.org/foodsafety/) was designed by the Washington State Department of Agriculture (WSDA) to identify and share best practices relating to farm food safety for growers operating small, mid-sized and diversified fruit and vegetable farms. The program is designed to help auditors understand the challenges of smaller-scale diversified producers. The program provides resources and tools for small to mid-sized farms on GAP certification and developing a GAP/GHP manual for small to mid-sized specialty crop farmers and processors. The program will offer an online wizard that walks producers through the GAP process to prepare for and schedule GAP/GHP audits.

### HANDS-ON EDUCATIONAL PROGRAMS

Hands-on educational programs go beyond offering information and resources on food safety to the public. Hands-on education provides interactive food safety opportunities and may include workshops, trainings, webinars and online courses.

**Farm to school food safety programs**

**California** - California Foundation for Agriculture in the Classroom offers the [Food Safety Program: From Farm to Fork](http://www.cfaitc.org/foodsafety/). This program provides fifth through seventh graders a better understanding of food safety through real-life examples and enjoyable activities. They learn that everyone has a responsibility in minimizing food-borne illnesses — farmers, transporters, restaurants, grocery stores and the consumer. Through reading, games, puzzles, math problems and science investigations, participants identify the roles each one of us plays to ensure the food we enjoy is safe to eat.\(^89\)

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\(^{89}\) California Foundation for Agriculture in the Classroom, Food Safety: From Farm to Fork, [http://www.cfaitc.org/foodsafety/](http://www.cfaitc.org/foodsafety/).
**Iowa** - *Implementing Food Safety Practices* is a series of workshops for farmers wanting to sell produce to Iowa State University. These workshops are four-hour sessions about GAPs, presented in a number of Iowa communities. The $25 fee will be waived if participants are approved as a University vendor. The cost includes a packet, workshop certificate and meal.\(^90\)

**Audit and GHP/GAP trainings and workshops**

**Arkansas** - The *Food Safety Starts on the Farm* GAP/GHP workshop is an effort to assist growers with the development and evaluation of food safety practices on their farms. The Arkansas Agriculture Department and the University of Arkansas, Cooperative Extension Service Division of Agriculture partnered to offer this one-day food safety workshop to encourage growers to implement food safety practices. The workshop features presentations from USDA’s Fruit and Vegetable Section, Arkansas Agriculture Department, a produce grower, an industry third party auditor, and experts working in produce retail/wholesale distribution businesses.\(^91\)

**California** - The *University of California GAPs Practical Skill-Building for Farm Risk Assessment Workshops* is an entry-level course designed for those developing food safety management plans. The cost is $350 for one day of instruction, instructional materials, lunch, coffee breaks and a networking reception. The fee for the optional half-day session in which participants build their own food safety manual is $125. Participants come away with a completed and printed manual customized for their farm operation and are ready to fulfill most expectations of a small-scale third-party audit. Participants will earn a workshop certificate.\(^92\)

**Connecticut** - The *Connecticut GAP School*, hosted by the University of Connecticut Cooperative Extension in cooperation with the Connecticut Department of Agriculture, conducts an annual GAP School to help farmers comply GAP standards and develop a food safety plan. GAP School consists of two five-hour sessions. The registration fee is $40 per person.\(^93\)

**Delaware** - The University of Delaware Cooperative Extension offers *Produce Food Safety Training Sessions: Good Agriculture Practices & Good Handling Practices* to educate producers on microbial food contaminants, outbreaks associated with produce, how produce becomes contaminated, GAP and GHP. Growers that market locally and do limited or no wholesale only need three hours of training. Growers that do significant wholesale must attend six hours of

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\(^91\) University of Arkansas, Good Agricultural & Handling Practices Workshop Food Safety Starts on the Farm, [http://www.aragriculture.org/marketing/ag_handling_information.htm](http://www.aragriculture.org/marketing/ag_handling_information.htm).


training to be certified. The training certificate is issued by the Delaware Department of Agriculture.

**Georgia** - [Developing & Implementing GAPs for HACCP-Based Food Safety in the Fresh Produce Industry](http://foodscience.caes.uga.edu/extension/EFS_training.html#FreshProduce) is a three day HACCP certification workshop offered to 40 participants per year through the University of Georgia College of Agriculture and Environmental Sciences. The workshop is tailored to the grower, packer, shipper and third-party auditor. Attendees learn how to recognize and minimize potential hazards in farm packing and shipping operations, and to develop a Food Safety Plan for their specific operations. Attendees earn a HACCP certification, accredited by the International HAACP Alliance, upon passing the HACCP exam at the end of the course.

**Illinois** - University of Illinois Extension offers a [GAPs Workshop](http://engage.illinois.edu/entry/9234) that provides an overview of GAP. The workshop includes a vegetable retailer presentation on concerns about food safety, good handling practices, food defense protocols in the food chain, self-auditing farms for food safety, crisis and risk management, and writing a food safety plan. The cost per participant is $30 and $25 for an additional farm/family member.

**Indiana** - Purdue University offers [GAP/Written Food Safety Plan Workshops](http://www3.ag.purdue.edu/extension/Lists/Extension%20Calendar/DispForm.aspx?ID=47037) to fruit and vegetable growers to work on individualized written food safety plans for their farms with Purdue Extension personnel. This two-day workshop also covers the basics on GAPs. Costs for attending these events are $30 and $20 per farm for the first and second days’ workshops respectively.

**Kansas** - The Kansas Farmers’ Market Organization offers [Post-Harvest Handling, Food Safety & GAPs: Making It Work on a Real Farm](http://www.ksfarmersmarkets.org/resources/workshop-resources-post-harvest-handling-food-safety-gaps-making-it-work-on-a-real-farm?v=organizers) . Workshop resources include *Food Safety Begins on the Farm: A Grower Self-Assessment* workbook, a sample farm map and a water testing handout.

**Maryland** - Calvert County Sustainable Agriculture Workgroup, the Southern Maryland Agricultural Development Commission and Calvert County Agricultural Commission conduct trainings for fruit and vegetable producers who want to learn more about implementing GAPs: [Good Agricultural Practices for Fruit and Vegetable Producers Training](http://www.mda.state.md.us/pdf/GAP_Training_Flyer_022212.pdf). The workshops last for seven hours and cost $20.

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95 University of Georgia, HACCP Certification Courses and Food Safety Training, [http://foodscience.caes.uga.edu/extension/EFS_training.html#FreshProduce](http://foodscience.caes.uga.edu/extension/EFS_training.html#FreshProduce).

96 University of Illinois, GAPs for Safer Produce, [http://engage.illinois.edu/entry/9234](http://engage.illinois.edu/entry/9234).


99 Calvert County Sustainable Agriculture Workgroup, the Southern Maryland Agricultural Development Commission and Calvert County Agricultural Commission, GAPs for Fruit and Vegetable Producers Training, [http://www.mda.state.md.us/pdf/GAP_Training_Flyer_022212.pdf](http://www.mda.state.md.us/pdf/GAP_Training_Flyer_022212.pdf).
Massachusetts - The USDA GAP Training Program is a day-long program focusing on developing a farm food safety plan, reviewing risk assessment, and incorporating the USDA GAP and GHP audit into the farm food safety plan. Worker training, water, manure, compost management, packinghouse sanitation, pest control and traceability also are discussed. The cost is $50 for the first registration. At the end of the session, participants will receive a certificate of participation and one pesticide credit for participating through UMass Extension. The program is sponsored by the University of Massachusetts Extension, the Massachusetts Department of Agricultural Resources, the USDA, and Bay State Organic Certifiers.  

Michigan - The GAPs and On-Farm Food Safety Training is a training program offered by Grand Rapids Community College in food safety practices to prepare farmers for GAP certification. Participants will complete a self audit utilizing workbooks received during the GAP training class and make necessary adjustments to ensure GAPs are being followed. One of the takeaways from this training is that farmers will develop their own certification manual with expert help. Enrollment fee is $199.  

Minnesota - The University of Minnesota provides the On-Farm Food Safety for Produce Growers program. The Agricultural Health and Safety team at the University of Minnesota works directly with Minnesota’s produce farmers to help them develop and implement farm food safety plans and prepare for GAPs audits. Assistance includes: education, outreach and technical support through GAP workshops and mock audits; and research relating to GAPs, especially as they impact small growers and immigrant and minority growers.  

Nebraska - The University of Nebraska-Lincoln offers GAPs Training workshops to help growers complete GAPs audits. The two-day workshops are taught by University of Nebraska-Lincoln Extension educators at four different locations across the state. At the end of the workshops, participating producers complete their own farm food safety plans. All educational materials and costs of the workshops are provided through a Rural Business Enterprise Grant (RBEG) from USDA Rural Development that was received by the Nebraska Sustainable Ag Society in partnership with the University of Nebraska Rural Initiative.  

New York - New York State Department of Agriculture Market’s Division of Food Safety and Inspection has developed the Produce Quality Assurance Program (PQAP) to meet the fruit and vegetable industry’s demand for third party certification services of its GAPs and HACCP practices. This program assists farmers in implementing HACCP plans for their packing, storage and transportation systems and GAPS to guide fruit and vegetable growers. Also, the Cornell Cooperative Extension Farm Food Safety Training with GAPs offers a two-day workshop for farmers interested in third party verification of their food safety practices. The first day focuses

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100UMass Amherst, GAPs Training, [http://extension.umass.edu/fruitadvisor/events/usda-good-agricultural-practices-gap-training-program.](http://extension.umass.edu/fruitadvisor/events/usda-good-agricultural-practices-gap-training-program.)


103University of Nebraska – Lincoln, GAPs Training, [http://events.unl.edu/acreage/2011/03/02/55059/](http://events.unl.edu/acreage/2011/03/02/55059/).

on the details of GAPs and how it works. The second day is devoted to developing a food safety plan. The cost is $100 for two days for one farm member and $20 per additional member for both days.\textsuperscript{105}

\textbf{Ohio} - The \textit{GAP Fruit and Vegetable Safety Program}, offered by the Ohio State University Fruit and Vegetable Safety Team, educates growers about GAPs through online and in-person workshops, farm tours and conferences.\textsuperscript{106}

\textbf{Pennsylvania} - The \textit{Keeping Fresh Food Safe—GAPs Training} is offered by Pennsylvania State University Extension. The training explains how audits work, how a grower can conduct a self-audit and how to write a farm food safety plan. All attendees will leave with the resources to write their own farm food safety plans and document their practices. Registration fee is $20.\textsuperscript{107}

\textbf{Texas} - \textit{Workshops to Enhance Food Safety on Texas Farms} are hosted by Texas A&M Extension in conjunction with the Texas Department of Agriculture (TDA). These are GAP/GHP food safety trainings for Texas specialty crop producers. The registration fee is $40. TDA offers grants to producers who complete the GAP training and pass an audit for GAP certification. Reimbursements of as much as $750 will be awarded to defray the costs of completing a successful audit.\textsuperscript{108}

\textbf{Vermont} - The \textit{University of Vermont Center for Sustainable Agriculture} assists produce growers address food safety issues for fresh whole produce. The Center’s Produce Safety and GAPs program provides education and technical support, conducts research, and coordinates communication among stakeholders on GAPs and food safety. The Center’s Outreach Coordinator assists farmers in meeting their food safety needs, developing a food safety plan, and preparing for a GAPs audits. This program also offers cost-sharing of as much as $500 for successful completion of an initial food safety audit.\textsuperscript{109}

\textbf{Washington} - \textit{WSU Extension Food Safety Program} workshops assist growers with food safety practices and third party certification standards. Participants completing the program will receive a course certificate. The cost of all three session is $125.\textsuperscript{110}

\textbf{West Virginia} - \textit{West Virginia Department of Agriculture GAPS Training} targets growers planning to sell to wholesale buyers that require GHP/GAP certification. The West Virginia Department of Agriculture hosts one-day certification trainings. The training costs $35.\textsuperscript{111}

\textsuperscript{105} Cornell University, Farm Food Safety Training with GAPs, http://www.cce.cornell.edu/EventDocs/Newark%20GAPs%20Registration%20April%203-4.pdf.

\textsuperscript{106} Ohio State University, GAPs Fruits and Vegetable Safety Program, http://producesafety.osu.edu/.

\textsuperscript{107} Penn State Extension, Keeping Fresh Food Safe, http://extension.psu.edu/start-farming/courses/keeping-fresh-food-safe-good-agricultural-practices-gap-training.


\textsuperscript{109} University of Vermont, Sustainable Agriculture Center, http://www.uvm.edu/~susagctr/?Page=gaphome.html.

\textsuperscript{110} WSU Extension, GAPs, http://foodsafety.wsu.edu/ag/index.html.

One-on-one training

**Hawaii** - **GAPs One-on-One Farm Food Safety Coaching** is a service provided by the University of Hawaii at Manoa. The program sends coaches to farms to assist with food safety plans and compliance. The audit preparation service is free and the average audit price is approximately $250.112

**New Hampshire** - The University of New Hampshire Cooperative Extension assists food producers and processors by providing **Food Safety GAP Programs** that include an on-site food safety evaluation. A team of Cooperative Extension educators visit the farm and work with the grower to critique and discuss food safety practices. After the evaluation, growers receive a copy of the completed checklist and a letter summarizing suggested changes to improve food safety. The GAP program is free and confidential.113

**General food safety trainings and workshops**

**Alabama and Tennessee** - The **Food Safety Education for Goat Producers & Fruit and Vegetable Growers in Alabama and Tennessee** is a workshop offered through Alabama A & M University and funded by the USDA to address food safety concerns among goat producers and fruit and vegetable growers in under-served communities in Alabama and Tennessee.114

**Colorado** - The **Colorado Produce Growers Food Safety Plan Regional Workshop Series** offers producers free tutorial guidance on the development of farm food safety plans through a four-hour development workshop with field experts and technical information. The goal of the workshop is to assist growers in developing and documenting food safety protocols. The program is hosted by the Colorado Department of Agriculture, Real Food Colorado and Colorado State University Extension.115

**Massachusetts** - The **University of Massachusetts Extension Service Food Safety Education Program** offers food safety resources and trainings. Its mission is to help prevent food-borne illness in Massachusetts through educational programs that address control of food-borne pathogens throughout the food chain, from farm to table.116 One notable tool found here is a 10-Part YouTube Instructional Series on GAP geared toward new producers.117

112 University of Hawaii at Manoa, GAP Coaching, [http://manoa.hawaii.edu/ctahr/farmfoodsafety/](http://manoa.hawaii.edu/ctahr/farmfoodsafety/).
113 University of New Hampshire Extension, Food Safety Programs, [http://extension.unh.edu/foodsafe/FSFP.htm](http://extension.unh.edu/foodsafe/FSFP.htm).
114 Tennessee University and Alabama Extension, Food Safety Education for Goat Producers & Fruit and Vegetable Growers, [http://www2.ama.edu/saes/sfrc/pdf/FoodSafetyBrochureII.pdf](http://www2.ama.edu/saes/sfrc/pdf/FoodSafetyBrochureII.pdf).
New York - Writing Your Farm Food Safety Plan—Your Ticket to Improved Farm Performance, is another Cornell Cooperative Extension program, is a one-day workshop for market growers to assist with the preparation of a food safety plan.118

Webinars and Online Courses

Colorado - The Colorado Farm to Table Food Safety website has a broadcasted webinar series from Colorado State University and Colorado Cooperative Extension. Webinars include GHP/GAP, Food safety and direct marketing and fundamentals of creating a Colorado Farm Food Safety Plan.119

Illinois - GAPs for Food Safety on Fresh Fruit and Vegetable Farms: Webinars covering GAPS from A to Z is a program hosted by Purdue University to disseminate information on GAP to farmers.120

Vermont - Farm To School Webinar—GAP & Food Safety Planning: One Farm’s Story.121 In this webinar, Susan Bergen of Peach Crest Farm in Oklahoma relates her farm to school story and talks about how she worked with Oklahoma State University to make her operation GAP compliant.

Texas - The Food Safety: Texas GAPs & GHPs Online Training program from Texas A & M Extension covers a variety of food safety related topics. Participants will earn a certificate upon completion of the courseware and passing an exam.

Small and beginning farmer education

Connecticut - The University of Connecticut GAP “Lite” Workshop provides three learning opportunities for small farmers, CSAs, school gardeners or other farmers who are not required to participate in a third-party GAP audit. The GAP program assists farmers in putting together a “lite” edition of a GAP food safety plan. There is no charge but preregistration is required.122

Florida - The Small Farm Food Safety: Fresh Produce is a short, interactive training program that introduces fresh produce food safety concepts. The program introduces participants to principles that summarize key concepts in GAPs and provides an introduction to food safety concepts that are important for small farmers.123

Mississippi - Establishing a Food Safety & Quality Assurance Program for Small Scale Farmers and Cooperatives in Mississippi is hosted by the Mississippi Small Farm Development Center.

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119 Colorado Farm to Table Food Safety, Webinars, http://farmtotable.colostate.edu/grow.php.
120 purdue University, GAPs Webinars, https://www2.ag.purdue.edu/hla/fruitveg/Pages/default.aspx.
The project identifies critical points for possible sources of food-borne contamination on farms and uses material identified to demonstrate to farmers how to reduce the risk of product contamination on their farms.124

**Missouri** - From the University of Missouri Extension Service, the [Missouri Beginning Farming](http://www.alcorn.edu/Academics/Schools/AREAS/MSSmallFarm/Default.aspx?id=8712) program assists those who are relatively new to farming. An interdisciplinary team has assembled a wide range of information and online publications, and offers workshop and other educational opportunities. [Click here for workshop opportunities](http://www.uvm.edu/sustainableagriculture/Documents/PFS_registration_v.5.apr12.pdf).

**New York** - The [Produce Safety Alliance](http://producesafetyalliance.cornell.edu/psa.html) is a collaborative project being developed by Cornell University, USDA and the FDA to provide the produce industry with training and educational opportunities related to current best practices and guidance. Curricula includes GAPs and other preventative controls, including co-management. Outreach efforts focus on fresh produce growers, packers and grower cooperatives, with special emphasis on small farms and packing houses.125

**Vermont** - [Protecting Your Farm’s Markets and Profitability: Writing a Practical Food Safety Plan for Small and Diversified Farms](http://www.alcorn.edu/Academics/Schools/AREAS/MSSmallFarm/Default.aspx?id=8712) is sponsored by the University of Vermont. It is a day-long workshop on how food safety practices are being implemented on diversified farms. The registration fee is $30.126

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## FUNDING AND COST-SHARING

States are beginning to offer funding and cost-share programs to help farmers foot the bill for food safety audits and farm safety equipment. Generally, a state will agree to pay a portion of an audit to help offset the financial burden that food safety can place on farms.

**Alaska** - The Alaska Department of Natural Resources Division of Agriculture helps fund [USDA GAP Audits at a reduced price](http://dnr.alaska.gov/ag/Inspection/FV237.pdf) by providing audit stipends to specialty crop producers.127

**Arizona** - The Arizona Department of Agriculture’s (ADA) Agricultural Consultation and Training Program and the University of Arizona’s Cooperative Extension Service offer [GHP/GAP Training and Certification Cost-Share Program for Food Safety in Arizona](http://www.alcorn.edu/Academics/Schools/AREAS/MSSmallFarm/Default.aspx?id=8712). The free two-day program focuses on certification of food safety practices. After completing the free GHP/GAP training, a farmer can apply for cost-share funds to go through the ADA audit process to be certified for one year under the GHP/GAP certification. The cost-share program is designed to help defray

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125 Produce Safety Alliance, [http://producesafetyalliance.cornell.edu/psa.html](http://producesafetyalliance.cornell.edu/psa.html).

126 University of Vermont, Protecting the Farm, [http://www.uvm.edu/sustainableagriculture/Documents/PFS_registration_v.5.apr12.pdf](http://www.uvm.edu/sustainableagriculture/Documents/PFS_registration_v.5.apr12.pdf).

some of the costs related to a successful audit and growers are eligible for 75 percent reimbursement.\textsuperscript{128}

**Arkansas** - The Arkansas Agriculture Department reimburses 100 percent of farm food safety audit costs up to $1,000 though its [GHP/GAP Audit Assistance Program](http://www.uaex.edu/depts/ag_economics/presentations/DirectMarketing2011/AR_Agri_Dept_Overview.pdf). This program is good for an Arkansas State Plant Board inspection and third-party GAP/GHP inspections.\textsuperscript{129}

**Massachusetts** - The [USDA GAP Cost Share Program](http://extension.umass.edu/nutrition/index.php/programs/food-safety/programs/good-agricultural-practices) is offered through the Massachusetts Department of Agriculture, in collaboration with the USDA Specialty Crop Block Share Program. Any producer, individual or business located in Massachusetts that schedules and successfully completes their initial USDA GAP/GHP audit can apply for cost-share reimbursement. Qualified applicants may be eligible to receive as much as $750 per calendar year.\textsuperscript{130}

**New York** - The [Good Agricultural Practices/Good Handling Practices Certification Assistance Program](http://www.agriculture.ny.gov/AD/GAP/GAP_Certification.pdf), offered by the New York State Department of Agriculture and Markets (NYSDAM), will reimburse as much as $750 of the cost of having NYSDAM/USDA, or a qualified private auditing company, conduct third party audit(s), including water tests, to verify an establishment’s food safety program.\textsuperscript{131}

**North Carolina** - The [North Carolina Department of Agriculture and Consumer Services Audits](http://www.ncagr.gov/markets/NCgradesvc/) offer GAP Certification Cost Share Assistance Program to help North Carolina growers with financial support in obtaining a third party audit to verify they are following effective food safety practices.\textsuperscript{132}

**Oregon** - The [Oregon Department of Agriculture](http://food-hub.org/news/2011/05/oda-offers-cost-share-program-and-%E2%80%9Cmock-audit%E2%80%9D-for-good-agricultural-practices-certification-may-26-2011/) will reimburse 75 percent of the certification fees to a maximum of $250 for farmers who are not yet GAP-certified but are currently selling to, or interested in selling to, the institutional market.\textsuperscript{133}

**Pennsylvania** - The Pennsylvania Department of Agriculture (PDA) in association with USDA offers a voluntary Good Agricultural and Handling Practices third party inspection program. Businesses or individuals may receive as much as $400 per year to reimburse the costs of a successful initial PDA/USDA GAP audit.\textsuperscript{134}

**Tennessee** - The [Tennessee Department of Agriculture (TDA) Cost Sharing Program](http://extension.psu.edu/food-safety/farm) pays producers as much as 50 percent of $15,000 of qualified food safety expenses, on the condition that the producer completes a GAP Food Safety Workshop. Qualified expenses include farm

\textsuperscript{128} Arizona Dept. of Agriculture, GHP/GAP, [http://www.azda.gov/ACT/ghpgap.htm](http://www.azda.gov/ACT/ghpgap.htm).


\textsuperscript{134} Penn State Extension, [http://extension.psu.edu/food-safety/farm](http://extension.psu.edu/food-safety/farm).
food safety upgrades, including food grade materials for storage and harvesting, hand washing stations and restroom facilities.  

**Texas** - The Texas Department of Agriculture offers grants to producers who complete the GAP training and pass an audit for GAP certification. Reimbursements of as much as $750 will be awarded to defray the costs of completing a successful audit.  

**Vermont** - The University of Vermont Center for Sustainable Agriculture assists produce growers on food safety issues for fresh whole produce. This program also offers cost-sharing of as much as $500 for successful completion of an initial food safety audit. Also, the Vermont Agency of Agriculture, Foods & Market Capital Grant Improvement Program received $100,000 from the Vermont Legislature to provide matching grants for capital investments that support Vermont agricultural producers in obtaining GAP certification. There is a maximum cap among all GAP Capital Improvements Program grants of $10,000 per farm, and farms must contribute a minimum of 50 percent of total project costs.  

**West Virginia** - A GHP/GAP audit training is provided by the Mid-Ohio Valley Health Department, West Virginia Department of Agriculture, WVU Extension Service and the WVU Health Sciences Research Center. Participation in the training could make farmers eligible for cost-share assistance for GHP/GAP certification audits through the West Virginia Department of Agriculture.  

**Wisconsin** - The Wisconsin Department of Agriculture, Trade and Consumer Protection Audit Services received a USDA Specialty Crop Block Grant to help defray the cost of the USDA GAP/GHP audit certification programs.  

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137 University of Vermont Sustainable Agriculture Center, http://www.uvm.edu/~susagctr/?Page=gaphome.html.  
139 West Virginia University, http://wvutoday.wvu.edu/n/2012/04/30/regional-produce-growers-offered-safe-handling-and-agricultural-practices-training.  