

Pennsylvania Department Of Agriculture

Final Performance Report

**Specialty Crop Block Grant
Program**

12-25-B-0812

Good Agricultural Practices (GAP) & Direct Farm Sales (DFS)

October 2008 - September 30, 2009

1. Project title:

Good Agricultural Practices (GAP) Project

Project Summary:

Following USDA's focus on food safety, the Pennsylvania Department of Agriculture proposed working in-conjunction with Penn State University, the PA Bureau of Food Safety and Penn State Extension Educators to develop a Good Agricultural Practices Educational Program. The program provided Pennsylvania produce farmers and workers, and others in the distribution chain with a standardized set of food safety tools to minimize the opportunity for food safety risks. A farmer who practices Good Agricultural Practices implements proactive food safety control measures to prevent crop contamination. Specialty crop block grant funding of \$71,081 provided the monetary support for project work.

Project Approach:

The Pennsylvania Department of Agriculture, industry representatives, and USDA worked together to develop a food safety audit curriculum based on the voluntary standards promulgated by the USDA Agricultural Marketing Service Fresh Produce Audit Verification Program. This approach was taken to assure measurable participation at training events and to simplify training by using recognized USDA standards already in place that would prepare growers for an actual audit. Working collaboratively with major grocery store chains that operate in Pennsylvania was desired in order to identify produce growers who are immediately, or who will eventually be, required to provide, as a condition of sale, evidence of compliance with established farm food safety practices.

A guidance document was developed to assist both auditors and producers through the audit standards and farm inspection process. Development and promulgation of a food safety plan template would help growers systematically organize necessary procedures, use monitoring checklists, and provide other documentation required in the USDA audit matrix.

Outcomes Achieved:

The project successfully accomplished its main objective. It provided education to more than 1,000 Pennsylvania growers on best methods to maximize on-the-farm food safety practices and minimize food contaminants. The project provided a fundamental framework for understanding and implementing good agricultural practices. Development of on-the-farm food safety flip chart, brochures, posters and handouts were deemed to be necessary educational tools to implement, supplement and reinforce food safety messages and programs. The live video conferencing training sessions delivered a key, consistent food safety message efficiently and effectively.

Program funds were used to create, develop and produce 15,000 four fold, full-color brochures, for state-wide distribution. Brochures provided summary explanation of GAP methodology, practices, and contact information. 5,000 were distributed by PDA during the PA Farm Show and over related venues. The remainder were distributed at GAP education workshops, extension offices through out the state and used by the Bureau of Food Safety. The brochure promoted upcoming GAP trainings and GAP cost share program.

A curriculum was developed and delivered via video conference technology to 408 individuals representing 236 farms in 20 Pennsylvania counties. This curriculum is the basis for developing video technology modules on farm food safety that will be made available to growers in 2010.

In addition, a “Penn State Food Safety Field Training Kit for Fresh Produce Handlers” was developed and 900 copies were printed. The kit includes a flip chart with simple illustrations and text in both English and Spanish to communicate basic hygienic practices. And, a guidance document on the USDA Audit Standard and template food safety plan were designed and made available to PA Auditors and all growers considering a GAP audit. Fewer copies were produced than originally planned, after determining fewer operations would have an initial interest in learning about GAP.

Materials purchased from outside sources include “Food Safety Begins on the Farm: A Grower's Guide” (400), “Did you know? - In the Field there is a need for hygiene too!” (400), “Did you know? Your kitchen could be a source of illness!” (50), “Fruits, Vegetables, and Food Safety: Health and Hygiene on the Farm, Worker Training Video” (300), “Laminated Handwashing Poster” (800), “Laminated Toilet Paper Disposal Poster (English and Spanish)” (800), and “Laminated Toilet Use Poster (800). A list of materials available and an order form (no charge to Pennsylvania growers) were distributed to extension educators.

The College of Agricultural Sciences Marketing department was contracted to develop three-panel desktop displays and magnet handouts to increase awareness of the GAP standards and where to find help. A set of video training modules is under way as well as an upgrade to the Penn State GAP web site which will improve access to educational materials and to help educators and growers keep abreast of the latest farm food safety events. These activities are currently in progress and are anticipated to be ready for dissemination by February 2010.

The program's goal was to increase the number of participating farms by 50%. According to the Bureau of Food Safety who tracks GAP audits; 119 GAP audits were conducted in 2009, compared to the 54 in 2008, for a 120% increase in participation. Passing an on-farm audit through third-party verification will enhance the competitiveness of our growers in the marketplace.

The expectation was to train 3,000 or 86% of the farm managers and employees during these sessions. Again the project did not reach 86% of the possible fresh produce managers; as it was determined only 300 producers currently fit the profile or another wards supply the retail chain stores with fresh produce. Thus, this initial grant targeted this core group and provided additional information, resources to the remaining 2,700 producers who currently sell fresh produce though other channels. This would include: direct sale, community supported associations, and wholesale produce auctions.

Beneficiaries:

Pennsylvania fruit and vegetable growers that supply locally grown fresh fruits and vegetables to regional and national grocery store chains are the key beneficiaries of this project since they have immediate and near-term needs for meeting farm food safety standards. Growers in Pennsylvania tend to have smaller economies of scale and are less likely to employ staff that can handle farm food safety requirements. In such situations, growers have less flexibility to learn about the standards and to develop relevant food safety plans. Since auditors charge an hourly fee, a well prepared food safety plan can help to minimize audit fees. The success of the workshop was publically recognized in the state as providing needed information that will benefit growers by lessening the financial and time burdens placed on small farms.

Second group of beneficiaries are the Pennsylvania grocery store chains. They have come to appreciate the need for a seasonal supply of fresh produce. One reason is the need to fill in supply chain gaps when produce from other states is not available. In addition, several grocery chains have taken advantage of the “buy local” trend by marketing the benefits of produce purchased from farmers close to home.

The third beneficiary is the Pennsylvania consumer; as the end-user of fresh produce they can feel better knowing the production of local food has integrated a proactive approach; to minimize potential food safety hazards on Pennsylvania farms. Preventing a food safety problem from happening through prevention, education and before it occurs.

Lessons Learned through the Project:

The diverse make up of the Pennsylvania Specialty Crop producer presented a challenge, 'as one size doesn't fill all' became clear as the program developed. Many growers sell direct and do not wholesale to the retail chain stores. Approximately 300 farmers sell direct to retail chain operations. The remaining producers sell direct to end users via farmer's markets, farm market or CSA. Hence, a large percentage of growers did not perceive GAP standards applied to their operation. It has been concluded this was an excellent beginning; but much work remains to be done in the arena of food safety~ microbial contamination.

To maximize staff resources and grant funds it was determined to conduct a video conference technology format for conducting training and outreach, verse on-site trainings across the state. The format was so well received, that the curriculum for this event is being transformed into a series of video modules that extension educators can use to set up their own workshops. Conference call telephone feeds from Penn State, PDA, and/or USDA would provide the necessary level of expertise for answering specific questions.

Appendices: A- E attached

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2. Project Title:

Direct Farm Sales Grant Project

Project Summary:

The Direct Farms Sales Grant Program (DFS) was designed to assist farm markets and farmers' markets with promoting specialty crops and to increase access to nutritious, fresh produce. A total of 39 projects (sub-grantees) were selected from 27 Pennsylvania counties. This program led to increased participation in food assistance programs, enrollment in PA Preferred state branding program and provided support for specialty crop farmers to remain viable in tough economic times. The DFS program in 2008 received \$100,000 to provide state wide assistance with marketing, promotion and education of specialty crops throughout the state's farm markets and farmer's markets.

Project Approach:

The Direct Farm Sales Program was conducted by the Pennsylvania Department of Agriculture's Bureau of Food Distribution. The Bureau was responsible for managing the application process, determination of grant qualifications, and the execution of monetary awards. The Bureau was also responsible for verification of individual project completion, collecting data pertaining to outreach and reporting information.

The grants were awarded to farm stands, farmers' markets, government units, and non-profit organizations that manage and operate farmers' markets located in Pennsylvania. All grantees completed and submitted an application by the established deadline. The program operated from March 1, 2009 through September 30, 2009.

The Direct Farm Sales Program used a competitive process to award grant funds to farmers, current and prospective owners of farm stands or farmers' markets, non-profit organizations and local governments. Grant recipients use grant funds for projects such as developing new farm stands or farmers' markets, market promotion, equipment and staffing costs, nutrition education materials and outreach programs. The objectives of this Program are to develop or expand farm stands or farmers' markets within Pennsylvania, and to expand outlets to support Pennsylvania's Farmer Market Nutrition Program (FMNP). Each grant applicant must provide at least 25 percent of the grant amount in matching or in-kind services.

Project Goals and Outcomes Achieved:

The Direct Farm Sales program provides an opportunity for the Pennsylvania Bureau of Food Distribution to determine the usage of FMNP coupons as well as the geographic location of participants. The program surpassed its goal of 95 applicants; by receiving one hundred (100) applications. Four were determined to be in-eligible (not specialty crops oriented). Therefore, ninety-six (96) eligible producers participated in the competitive review process.

The number of FMNP redemptions was expected to increase across the state from 74% to 84%, because greater awareness and accessibility through new and expanded locations. Although the final number will not be official until mid-January, 2010; the number is expected to have remained the same (74%). The distribution of FMNP checks occurred late in the season; due to the delayed passage of the State Budget. The majority of the grant recipients felt that accepting the FMNP checks helped to bring in new customers. Approximately 17,160 FMNP checks were redeemed at the farmers markets and farm stands that received a Direct Farm Sales grant. Note one market in Beaver Falls would probably close without the FMNP checks. The checks account for 35-50% of the markets sales.

DFS program also focused on growing the awareness and participation of the state branding program, PA Preferred. During this program PA Preferred membership from participating sub-grantees increased by two; totaling 92; or 96% of sub-grantees participated in the state branding program.

Increasing the number of outlets in underserved areas was another project goal. Two new farm markets were created thorough this grant program. Two of the sub-grantees provided greater access to their fruits and vegetables by including means of transportation to the farm market stand. For example, Easton Farmer's market provided a trolley route to improve access for senior citizens (see attachment) and Lafayette college students and Threshold Foundation created a mobile farmer's market. Lastly, creating increased awareness of Pennsylvania farm stands and farmers' market outlets. Approximately 97,185 people benefited from having these grant project completed. This number only includes people who visited the markets and farm stands.

Beneficiaries:

Clearly the main beneficiary from this program is the consumer. The increased awareness, food assistance, and education received from the various activities served to improved the overall availability of specialty crops. Secondary level of beneficiary is the producer, who witnessed increased market traffic, increased sales, customer loyalty and knowledge of PA Preferred products.

Lessons Learned:

The DFS program requested \$100,000, but had requests of more than \$600,000. The program may consider requesting additional funds in future years; to better meet the marketing and educational needs of the PA direct marketers. The sub-grantees learned a variety of lessons, they include the following:

- The commitment to marketing is just as intensive of an activity as producing the crop. The consumer may not always want to pay the price for 'locally' grown or fresh produce when less expensive choices are available.
- Limited income customers were not always about to buy an entire pint or peck of fruits and vegetables or pay for the benefit of buying locally grown food. Farmers may need to consider selling a "variety pack" that has one of everything rather than trying to get customers to buy a quart of each item. As a result of the grant the County Extension office is conducting six-week nutrition courses in cooperation with the homeless shelter's transitional housing program.
- Additional resources needed to increase EBT sales, which they believe can be accomplished through continued promotion and by expanding access at our farmers' markets, by providing every farmer with a wireless card reader, and by providing training on how to use the machines.
- Discovered there is an opportunity to expand on consumer education by forming stronger partnerships with local service providers such as Hospitals and wellness centers.
- Missing 10 sub-grantees for the following reasons: One dropped out because we didn't give them enough money. Five of them haven't submitted reimbursement requests or evaluation reports. The rest didn't have narrative with their final report only numbers for the questions that were asked.

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APPENDIX

Direct Farm Sales (DFS) Program

Summary list of sub-grantees and their respective project:

1. Downtown Bedford, Inc.: \$1,586 to promote the Bedford Farmers Market. The Bedford Farmers Market Project created greater public awareness of the market. Signs, posters and brochures provided a constant reminder to people about the market and were a great advertisement for visitors to the area. The market experienced an increase in shoppers and increased sales.
2. Berks Agricultural Resource Network: \$2,750 to create Opportunity Farmers Market at the Opportunity House, a non-profit homeless shelter in Reading. The primary goal of the Berks Agricultural Resource Network was to reinstate a farmers' market in the City of Reading since there is no longer an inner-city market to serve the residents. Opportunity House opened on May 22, 2009. Unfortunately, the market's location was its limiting factor for providing the farmers with sufficient income to continue the market. Despite efforts to improve signage, advertising and community outreach sales shrank rather than expanded. As a result the market closed in September.
3. Penn State Cooperative Extension – Lehigh County: \$2,000 to create and distribute the Lehigh Valley Farm Market Guide & Map. Lehigh County Extension created a farmers market map and guide. All farms listed and promoted with the map/guide reported increased consumer exposure and shopping traffic. Many of the locations also reported an increase in net revenue. The grantee completed a survey, the results were as follows: 95% used the map to locate a farm market for shopping, 78% stated that they visited a new-to-them farm market because of the guide, 84% visited up to five farm markets because of the map and guide, and 85% of the total survey plan to return to a farm market the found by using the guide.
4. Easton Farmers Market: \$3,500 to promote sales at the farmers market. The Easton Farmers' market provided a trolley with the purpose of: providing a convenient means of transportation for senior citizens to the market, a to attract more customers from Forks Township and College Hill, to provide easy access for Lafayette College students and to garner additional exposure for the market. The ridership was lower than the market had hoped, but they still felt that the trolley served the intended purpose.
5. Venture Lititz: \$1,500 to promote the Downtown Lititz Farmers Market. The Lititz Farmers market was able to attract two young farmers to their market who chose farming as their careers. The Market Master is an FFA student. Several FFA students work for farmers in the market. The FFA students organized an Ag Day at the market. The market has seen an increase in the number of people visiting the market. A customer survey indicated that they appreciate that the market is a "grower only" market because they meet the grower and know where their food is coming from.

6. Coutts Blueberry Farm Market: \$2,000 to create and promote a new farmers market in Hawley. Paupack Blueberry Farm's goal was to set up a shed where customers could buy produce from local growers. The grant allowed them to meet this goal. The customers love the new place where they could purchase fruits and vegetables!
7. Eden View Organics: \$1,556.25 to promote sales of locally-grown produce. Eden View Organics goal was to make their farm stand more visible and inviting to the many passers-by and to use signage as way to promote their business.
8. Saucon Valley Farmers Market: \$2,500 to support growth of the Saucon Valley Farmers Market through strategic marketing education and outreach activities. Saucon Valley Farmers' Market goals were: to expand consumption of Pennsylvania grown agricultural commodities through increased attendance at the Saucon Valley Farmers' Market, to educate consumers on the nutritional benefits of purchasing and consuming locally grown commodities, and to strengthen downtown revitalization efforts by promoting awareness of local community organizations and businesses.
9. Joshua Group: \$2,750 to expand the Joshua Farm Stand operated by at-risk youth. Joshua Farm Stands goals were to make locally grown produce more accessible to residents of the target neighborhood by increasing awareness of local food options through targeted outreach, to make nutrition education an integral part of the farm stand's outreach and point-of-sale operations, and to equip the farm stand with staff and materials to meet increased demand. The farm stand had many repeat customers this year.
10. Enon Country Gardens: \$3,500 to promote FMNP check redemption and nutrition. Beaver Falls Markets goals were to: increase FMNP check redemption at the markets, conduct food demonstrations on how easy it is to prepare fresh foods. The market also provided information sheets containing produce care, cooking and preservation tips.
11. Capital Area Resource Conservation & Development: \$2,500 to link farmers with underserved consumers, local restaurants and retailers in the Harrisburg area. Their goals were: to increase the viability of the region's agricultural producers by linking them with additional income opportunities, increasing the consumption of PA grown agricultural products, inform underserved citizens of the value of direct-marketed farm products including economic, environmental and nutritional benefits, link producers in servicing low-income and underserved customers through promotion of the FMNP,

provide nutrition and health education to at-risk populations and develop a long-term and sustainable strategy for connecting consumers with local producers using printed materials.

12. The Fisher Farmstead: \$2,750 to a project entitled, “Preserving Your Foods Preserves Our Pennsylvania Farms.” The project goal of Fisher Farm Stand was to reach out to single parents and educate them on healthier eating with fresh fruits and vegetables. The farm stand conducted classes on healthy eating and preserving fresh fruits and vegetables.
13. Historic Kennett Square: \$1,500 to promote the Kennett Farmers Market As a result of the grant, Kennett Square Farmers Market was able to increase the attendance at the market on a regular basis. Most weeks resulted in an increase in the number of visitors to the market. Marketing efforts included a market newsletter and Facebook updates.
14. Farm to City: \$2,250 to promote Rittenhouse Square Farmers Market, Fountain Farmers Market and City Hall Farmers Market. Project goals for the Farm to City project were: to increase the amount of the customer’s food budget spent at the market, and to increase customer awareness of the variety, value, and culinary uses of the Pennsylvania grown agricultural products sold at the market.
15. Pennsylvania Wilds Agriculture Heritage Alliance: \$2,750 to promote “Building Local Food Systems” projects. PA Wilds Agriculture Heritage Alliance project included promotional events at farmers market, brochures and weekly ads in local newspaper, educational programs for farmers, and signs and banners.
16. The Food Trust: \$4,700 to increase Pennsylvania produce sales and electronic benefit transfer, or EBT, for the Farmers Market Nutrition Program at the Clark Park Farmers Market in West Philadelphia. The goals of the Food Trust project were: to increase usage of food stamps and other food assistance programs at Clark Park Farmers’ Market, to increase sales of regionally grown produce for Pennsylvania farmers who are vendors at Clark Park Farmers’ Market, and to educate at-risk consumers at market-based events to promote better health and prevent chronic, diet-related diseases.

17. Weaver's Way Community Programs: \$2,250 to support nutrition education and local resident access to healthy and affordable locally-grown fruits and vegetables at the Stenton Avenue Farm Stand. Weavers Way Community Programs goals were: to provide area residents with access to healthy and affordable locally grown vegetables and fruits through the Stenton Avenue Farm Stand, to increase the use of FMNP checks and provide nutrition education through distribution of Pennsylvania Nutrition Tracks educational materials for children and adults.

18. Adams County Farmers Market Association: \$2,750 to promote farmers markets in the county. The Adams County Farmers Market Association primary goal was to increase the visibility of the farmers markets and access to locally grown fresh food. The association's website was developed and has been very successful.

19. Penn State Cooperative Extension – Warren County: \$3,500 to increase awareness, attendance and sales at the Warren Farmers Market. The project goals of Montrose Farmers' Market were to create a neat eye-catching display to attract customers, increase visibility of the market, and enhance awareness for local farm products.

20. Lansdowne Economic Development Corporation: \$2,750 to promote the Lansdowne Farmers Market. Lansdowne Farmers' Market goals were to increase the consumption of fresh, locally grown, healthy foods. This goal was accomplished by attracting 400-600 additional customers a week and added additional local fresh food vendors. Their second goal was to broaden the market for small and minority-owned businesses and add more fresh food vendors. Four new vendors were added to the market. The last goal of the market was to increase access to the Lansdowne Farmers Market by FMNP participants.

21. Conshohocken Borough: \$2,750 to promote the Conshohocken Farmers Market. Conshohocken Farmers Market goals were to hire a market manager, conduct promotional activities, and improve data collection and market reporting.

22. Tall Pine Farms: \$2,250 to the project, "From Overgrown and Abandoned to Pennsylvania Farm Fresh Produce." Tall Pine Farm installed a roadside sign so that people could easily locate the farm. Materials were also purchased to protect produce from the elements at the farmers market.

23. Threshold Foundation: \$3,500 to support their mobile farmers market operated by at-risk youth. Threshold Foundation created a mobile farmers market with the goal of fully utilizing land by growing additional produce. The mobile market ran three to four days a week for a total of 20 weeks.
24. Maple Lawn Farms: \$2,250 to support a direct mailing campaign to reach new customers for pick-your-own fruit and farm market sales. Maple Lawn Farms used the grant for a direct mailing of postcards to alert customers of their newsletter becoming electronic rather than paper based.
25. Tabor Community Services: \$1,500 to support Eastern Market's ability to increase access to fresh Pennsylvania-grown food for low income residents. Eastern Market goals included: increasing access to fresh locally grown produce particularly for low income residents, and increase the size of the markets customer base. The markets customer base grew by 4%
26. Plowshare Produce: \$2750 to promote the increased consumption of fresh, local, sustainably-produced vegetables in northern Huntingdon County. Plowshare produce created a farm stand in Huntingdon County. Their additional goals were: to increase the consumption of fresh vegetables, distribute nutritional information, establish the stand as a community gathering place, and promote the use of FMNP checks.
27. Penn State Cooperative Extension – Warren County: \$3,500 to increase awareness, attendance and sales at the Warren Farmers Market. Warren County Cooperative Extension project goals were to increase public awareness of the Warren Farmers Market, increase the number of people attending the Warren Farmers Market, increase the amount of sales, and increase the redemption rate of FMNP checks.
28. Paradise Gardens & Farm LLC: \$2,500 to help promote sales of locally-grown produce. Paradise Garden's project goals were to build a farm stand, advertise, increase CSA shares, and increase sales at the farm.
29. Hollabaugh Brothers, Inc.: \$1,500 to increase sales and awareness of local produce. Hollabaugh Brothers Fruit Farm project goals were to increase their customer base, increase total sales, increase FMNP check redemption at their stand, advertise using several different sources, and to increase the life of perishable products.



Farm Food Safety

KEEP FRESH PRODUCE SAFE USING
**GOOD AGRICULTURAL PRACTICES
(GAPs)**



Food Safety Begins on the Farm

INTRODUCTION

Pennsylvania fresh produce growers can be proud of the wholesome and nutritious fruits and vegetables they grow. Unfortunately, recent food borne disease outbreaks traced to fresh produce have caused consumers to question the safety of our fresh food supply. Most produce related illnesses have been traced to crops grown in other parts of the U.S. or in other countries. But microbial contamination can happen anywhere—even in Pennsylvania. Every grower (small, medium, or large) has a responsibility to minimize food safety risks on the farm. All growers should evaluate their farm practices and begin to implement and train workers in Good Agricultural Practices.

THE CONSEQUENCES OF FOODBORNE ILLNESS

You may have read in the news about food contaminated with Salmonella, E. coli O157:H7, Listeria, or Hepatitis A. These and other pathogenic microbes cause over 75 million people to get sick each year. Most cases are not very serious—an upset stomach, vomiting, or diarrhea. But the very young, the elderly, and people with impaired immune systems can become seriously ill.

There is no way to know for sure how much foodborne illness originates on the farm. But we know that the number of illnesses traced to fresh produce has grown faster than any other type of food. Bad publicity and consumer lawsuits have caused some farms to shut down and many grocery stores and restaurants now demand proof that the fresh produce they buy has

been grown under the safest possible conditions. Some buyers are now requiring independent farm food safety inspections, known as third party audits, as a condition of sale.

There is no way to guarantee that every fruit or vegetable is free of harmful microbes. But one of the most important things you can do to protect consumers, and your business, is to do all that is possible to prevent microbial contamination from occurring.

GOOD AGRICULTURAL PRACTICES (GAPs)

Farmers can prevent on-farm contamination of fruits and vegetables using “Good Agricultural Practices” or “GAPs.” GAP’s is a new way of thinking about food safety. It’s not about waiting for a bad situation to occur and then fixing the problem. It’s about learning where food safety hazards can occur and taking preventative steps before your product leaves the farm. GAP’s protect the public from harm and your farm business from the economic consequences of food contamination.

If your buyers ask you to submit to a farm inspection, help is available. The Pennsylvania Department of Agriculture in association with USDA offers a voluntary Good Agricultural and Handling Practices third party audit program. Businesses or individuals may receive up to \$400 per year to reimburse the costs of a successful initial PDA/USDA GAP audit.

Use the following recommendations to minimize contamination of fresh produce.

For more information

PENN STATE COOPERATIVE EXTENSION

Contact the Penn State Cooperation Extension office in your county for GAPs information that will help you prepare for an audit or visit www.foodsafety.psu.edu/GAPs.

PENNSYLVANIA DEPARTMENT OF AGRICULTURE

Learn more about the PDA/USDA third party audit program by contacting:

Donald Wellbrock
Pennsylvania Department of Agriculture
Bureau of Food Safety and Laboratory Services
Eggs Fruits and Vegetables Division
2301 North Cameron Street Room 112
Harrisburg, PA 17110-9408
Phone: **717-787-4315**
Email: dwellbrock@state.pa.us

For information about the Pennsylvania Department of Agriculture GAP audit cost share reimbursement program, contact Jared Grissinger at **717-705-9513** or jgrissinge@state.pa.us.

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Minimize Fresh Produce Contamination from Planting to Harvest

BEFORE PLANTING

Consider previous use, topography, and wind patterns when selecting a growing site

- Avoid sites where dumping occurred or that were recently used as animal grazing or holding areas
- Review land history for prior use or storage of toxic chemicals
- Choose growing sites that are uphill, upstream, and upwind from areas where animals graze or are housed
- Be aware of the presence of feed lots, animal pastures, poultry farms, or dairy operations on neighboring properties and their potential to contaminate your crop
- Know upstream uses of surface water used for irrigation
- Avoid sites that regularly flood or where excessive run-off occurs
- If run-off or flooding is likely, construct physical barriers such as berms or swails, or plant non-food crop vegetative buffer areas

Manure and biosolids can contain harmful microorganisms and should be treated before application

- Store manure as far away as practical from areas where fresh produce is grown and handled
- Where possible, erect physical barriers or wind barriers to prevent runoff and wind drift of manure
- If raw manure is applied to fields, incorporate it into the soil at least 120-days before harvesting, preferably in the fall when soils are warm (>50°F), non-saturated, and cover cropped
- For applications closer to harvest, use aerobic composting techniques that raise core temperatures to above 130°F for at least 5 days. Turn the pile several times to ensure even heat exposure to all parts of the pile
- If manure is not composted, age the manure to be applied to produce fields for at least six months prior to application

PRODUCTION

Keep animals and manure away from growing areas

- Domestic animals should be fenced so they cannot enter produce fields or have access to surface water used for irrigation
- Inspect fences regularly to make sure they are in good condition and that animals cannot burrow underneath them
- Keep dogs, cats, and other pets out of fields and orchards during the growing season
- Be aware of wild animals in the area and discourage them from entering fields using fences, soil buffer strips, noisemakers, or other practical means
- Make sure manure lagoons and sewers do not leak or overflow into fields during heavy rains

Do NOT side-dress with manure, manure “tea”, or mulches containing fresh manure

- If side-dressing is required, use only well-composted or well-aged (greater than one year) manure
- Manure applied to nearby fields should be covered while stored, and applied on a schedule that does not interfere with the produce-growing schedule

Consider the safety of water you use that comes into contact with the edible part of the crop

- Surface water has the highest food safety risks
 - Avoid using surface water for overhead irrigation or sprays close to harvest
 - Use drip or furrow irrigation methods, if possible, since they minimize contact with the edible part of the crop
- Private well water is a safer alternative if you are sure of its quality
 - Locate wells away from flood zones and animal holding areas
 - Test well water before each season for harmful bacteria
 - Inspect wells annually to make sure they in good condition
- Municipal drinking water is the safest source and can be applied at any time using any irrigation or spray method

HARVEST

Provide employees with adequate, readily accessible, and sanitary toilet and restroom facilities

- Toilet facilities should be adequate for the number of workers, easily accessible, and have self-closing doors
- Keep them clean, well maintained, and supplied with toilet paper
- Each toilet facility should have a hand washing station that has running water, soap, disposable towels, a trash container, and a hand washing sign to reinforce correct behavior

Promote good hygiene practices for produce harvesters and handlers

- Do not allow workers who show signs of diarrhea, vomiting, fever, sudden yellowing of the skin, or infected wounds to handle fresh produce
- Prohibit eating, chewing gum, and tobacco use in growing areas
- Dispense drinking water in single-use cups or by fountains—not in common cups or dippers
- Make sure workers use the toilet facilities provided
- Teach them when to wash their hands before starting to work—after each break, after handling unsanitary items such as animals, manure, or decayed produce, and after using the toilet facilities

Use field sanitation practices

- Keep harvest equipment and tools clean and in good repair
- Check harvest machinery to see if fluids are leaking or if there are loose or damaged parts
- Protect exposed glass on equipment with plastic or wire fixtures
- Use harvest containers and tools that are easy to clean
- Clean containers before each use and repair or discard damaged ones
- Remove as much dirt as practical from produce before moving it to packing areas
- Handle produce carefully to avoid bruising and damage and do not overfill containers
- Remove harvested produce from the field quickly and protect it from sources of contamination

POST-HARVEST

Protect harvested produce from contamination

- Keep harvest containers covered to prevent overhead contamination
- Handle produce carefully during unloading to prevent bruising and damage
- Do not allow boxes of washed produce to directly contact the floor
- Cool produce quickly to minimize microbial growth
- Do not overload coolers and monitor temperatures regularly

Use only potable water for transporting, washing, waxing, or cooling harvested produce

- Change water in tanks regularly to prevent buildup of soils
- Add a sanitizer to tank water and monitor concentration and pH as necessary
- Install vacuum breakers on hoses and maintain air gaps to prevent back flow of water
- Keep tank water temperatures at least 10°F warmer than internal produce temperature to avoid uptake of microbes into the produce

Keep areas inside and outside packing houses clean and free of pests

- Regularly remove litter, trash, and unused equipment that can attract and hide pests
- Keep grass short and remove tall weeds regularly
- Clean loading, staging, and packing areas and sanitize food contact surfaces each work day
- Keep doors and loading docks closed when not in use
- Place rodent traps at entrances and eliminate perching sites for birds

Make sure toilet, handwashing and personal practices rules are followed

- Enforce health and hygiene practices
- Make sure restrooms are well ventilated, cleaned each day they are used, and do not open directly into packing areas
- Confine eating and drinking to designated break areas

Minimize opportunities for contamination and microbial growth during shipping

- Inspect trucks for cleanliness and pre-cool refrigerated vehicles before loading
- Load carefully to avoid damage to the product
- Lock or seal the truck door to keep secure
- Keep records of where each product was grown and when it was packed and shipped





Keeping Fresh Produce Safe Using Good Agricultural Practices (GAP)

A video conference training opportunity for Pennsylvania fruit and vegetable growers

March 25 and March 31 at 20 Pennsylvania locations

***Salmonella* bacteria on melons, tomatoes, and peppers. *E. coli* O157:H7 on spinach and lettuce. Hepatitis A virus on green onions.** No doubt you have read the news - foodborne illness traced to fresh produce has risen dramatically in the last several years. Most of these illnesses have been traced to crops grown in other parts of the U.S. or in other countries. But microbial contamination can happen anywhere—even in Pennsylvania.

To maintain consumer confidence in our food supply, wholesale buyers (e.g. grocery stores, restaurants, auctions, packers, distributors) are increasingly requiring grower suppliers to provide evidence that the produce they buy has been grown under the safest possible conditions. Perhaps your buyer has asked you to get trained in farm food safety, or to develop a food safety plan for next season. Maybe even submit to a third party farm inspection as a condition of purchase.

Do you sell fresh produce to wholesale markets? If so, Penn State University Cooperative Extension invites you to a special farm food safety training opportunity. This 1-day workshop will be delivered from the Penn State main campus to 20 Pennsylvania counties. Speakers from the Penn State Department of Food Science, the Pennsylvania Department of Agriculture, and the USDA GAP audit program will be on hand to teach you the basics of farm food safety, known as Good Agricultural Practices (GAP), how to write a GAP plan, and how to prepare for a farm audit. There will be plenty of time for questions and discussion.

Through a special grant from the Pennsylvania Department of Agriculture, this workshop is being offered at no cost. However, **you must register by March 2** to reserve a seat. You will also receive valuable course materials including copies of presentations, reference materials, laminated food safety posters, and a food safety flip chart you can use to train your workers. Lunch will be included too.

Use the attached sheet to find a course location near you, the date offered, and the telephone number you need to call to reserve a seat. Don't wait! Seating will be limited to space available.

For general information about this workshop call 814-863-7448 or 814-863-2298

Penn State University - Penn State Cooperative Extension - Pennsylvania Department of Agriculture



Penn State Farm Food Safety Workshop

Please register by telephone for Wednesday March 25 or Tuesday March 31, 2009

Select one location and available date

Region/County	Training Site	To register call:	March 25, 2009	March 31, 2009
Capital Region				
Adams	Adams County Cooperative Extension, 670 Old Harrisburg Road, Suite 204, Gettysburg, PA	Jim Remcheck 717-334-6271	Please Register	
Cumberland	Cumberland County Cooperative Extension, 310 Allen Road, Carlisle, PA	Steve Bogash 717-240-6500		Please Register
Franklin	Franklin County Cooperative Extension, 181 Franklin Farm Lane, Chambersburg, PA	Steve Bogash 717-263-9226	Please Register	
Lancaster	Lancaster County Cooperative Extension, 1383 Arcadia Road, Room 140, Lancaster, PA	Tim Elkner 717-394-6851	Please Register	
Central Region				
Centre	Penn State University Main Campus, 110 Ag Sciences Bldg, University Park, PA	Roana Fuller 814-863-7448	Please Register	Please Register
Union	Union County Cooperative Extension, 343 Chestnut Street, Suite 3, Mifflinburg, PA	Jeff Mizer 570-837-4252		Please Register
Clinton	Clinton County Cooperative Extension, 47 Cooperation Lane, Mill Hall, PA	Tom Butzler 570-726-0022		Please Register
Mifflin	Mifflin County Cooperative Extension, 152 East Market Street, Suite 100, Lewistown, PA	Tom Walker 717-248-9618	Please Register	
Northumberland	Northumberland County Cooperative Extension, 443 Plum Creek Road, Sunbury, PA	Lynn James 570-988-3950		Please Register

More locations on back. . .

Northeast Region				
Lackawanna	Lackawanna County Cooperative Extension, 200 Adams Avenue, Lower Level, Scranton, PA	John Esslinger 570-963-6842		Please Register
Luzerne	Luzerne County Cooperative Extension, 16 Luzerne Avenue, Suite 200, West Pittston, PA	Mary Ehret 570-825-1701	Please Register	
Tioga	Tioga County Cooperative Extension, Courthouse Annex, 118 Main Street, Wellsboro, PA	Cathy Guffey 570-724-9120	Please Register	
Northwest Region				
Erie	Penn State Erie – The Behrend College, Kochel Center, Room 69, Erie, PA.	Andy Muza 814-825-0900	Please Register	Please Register
Southeast Region				
Berks	Penn State Berks Campus, 145 Thun Library, Reading, PA	Joan Cook 610-378-1327		Please Register
Lehigh	Penn State Lehigh Valley Corporate Learning Center, 100 Brodhead Rd., Suite 120, Bethlehem, PA	Robert Leiby 610-391-9840		Please Register
Montgomery	Montgomery County Cooperative Extension, 1015 Bridge Road, Suite H, Colleagueville, PA	Scott Guiser 215-345-3283	Please Register	
Schuylkill	Penn State Schuylkill Campus, Ciletti Memorial Library. Schuylkill Haven, PA	Andy Beck 570-622-4225		Please Register
Southwest Region				
Allegheny	Allegheny County Cooperative Extension, 400 North Lexington Street, Pittsburgh, PA	John Shea 412-473-2540	Please Register	
Blair	Blair County Cooperative Extension, Valley View "E" Wing, 301 Valley View Blvd., Altoona, PA	Tom Ford 814-940-5989	Please Register	
Washington	Washington County Cooperative Extension, 100 West Beau Street, Suite 601, Washington, PA	Lee Young 724-228-6881		Please Register
Westmoreland	Westmorland County Cooperative Extension, Donohoe Center, 214 Donohoe Road, Suite E, Greensburg, PA	Eric Oesterling 724-837-1402	Please Register	



SPEAKERS:

Luke LaBorde

Associate Professor
Penn State University Department of Food Science

Martin Bucknavage

Food Safety Extension Associate
Penn State University Department of Food Science

Ken Peterson

United States Department of Agriculture
Agricultural Marketing Service - Fruit & Vegetable Programs
Fresh Products Branch

PROGRAM AGENDA:

AM Session (9 am – 12 pm)

- Welcome and introductions
- Overview of U.S. and global farm to fork food safety standards – How do they affect your operation?
- Potential Biological, Chemical, and Physical Hazards in Agricultural Production
- Good Agricultural Practices Principles
 - 1) Safety of Water
 - 2) Manure and Biosolids
 - 3) Health and Hygiene Practices
 - 4) Post-Harvest Handling

Lunch (12 – 1 pm provided on-site)

PM session (1 – 3:00 pm)

- The USDA/PDA GAP Audit Program
- Writing a GAP food safety plan
- Preparing for a farm audit
- Wrap-up – Resources, course evaluation, and next steps

For general information about this workshop call 814-863-7448 or 814-863-2298

All Aboard!



Ride the
NEW
Easton Farmers'
Market Trolley

\$1 Roundtrip
From Forks Township
and College Hill

2 Trolley Stops: Forks Township & College Hill

Trolley departs from Forks Township Municipal Building every Saturday morning beginning at 8:45am. And from College Hill (High & Cattell Streets-caddy corner from WAWA) beginning at 8:55am. Trolley runs continuously to and from the market in Easton's Centre Square with pick-ups every half hour. Last trolley departs from Centre Square at 1:00pm.

easton
farmers'
market

Experience the freshness and excitement of America's longest-running open air market

24 Vendors featuring fresh local produce, pastured eggs and meat, creamery cheese, artisan bread and pastries, Amish baked goods, fudge, raw honey, jams and jellies, fresh herbs and salsa, beautiful bedding plants, handmade soaps, handcrafted jewelry, fine crafts and more. Plus a jam-packed schedule of special events & festivals!

www.EastonFarmersMarket.com

Market runs Saturdays May thru October, 9am – 1pm