

# GAPS



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## The Value of Good Agricultural Practices (GAPs) Training and Implementation

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The roots of Good Agricultural Practices (GAPs) trace themselves back to the 1998 FDA *Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables*. Though this was voluntary guidance offered to fruit and vegetable growers, many buyers demanded the implementation of GAPs as a purchase requirement. In 2011, the passage of the Food Safety Modernization Act's Produce Rule proposed the first ever regulations pertaining to fresh produce production. As requirements and pressure to adapt GAPs have evolved so too has the research and technology that advance our knowledge and ability to reduce microbial risks on the farm. Because of the ever changing nature of GAPs, a key part to GAPs understanding and implementation is training.

Given the time, effort, and expense of both conducting and attending the trainings, it was critically important to evaluate the trainings to make sure they were productive and valuable. Every training was evaluated after each day of instruction to determine if growers found the information valuable and made some progress towards understanding GAPs and developing a written farm food safety plan. A long term evaluation was completed by surveying training participants at least 6 months after they finished the multi-day course to determine what progress they had made, costs they had incurred, market access impacts, and assess other indicators to determine the long term impact of attending the training.

In the spring of 2014, 80 past participants, each representing a different farm, were asked to complete a 20 question survey administered by Cornell Cooperative Extension personnel. Though a formal research paper will be written, this summary is intended to share some preliminary findings from both the training evaluations and the long-term survey with growers since there will be additional GAPs training opportunities this winter throughout New York and the information may be valuable to growers attempting to decide if attending a GAPs training would benefit them and their farms.

New York has had an active GAPs training program for produce farmers since 1999, but as with research and technology, our training evolved to meet growers' needs for having a farm food safety plan. Developing a written farm food safety plan is valuable because it helps guide the implementation of GAPs and is required if the farm needs to have a third party audit to meet buyer demands. In December of 2009, personnel from the National GAPs Program at Cornell University in collaboration with Cornell Cooperative Extension Regional Fruit and Vegetable Teams and the New York State Department of Agriculture and Markets began a new multi-day GAPs training program for produce growers in New York. To date, 689 individuals representing over 350 farms, fruit and vegetable processors, marketers, crop consultants, and extension educators from New York as well as other states, have attended the trainings.

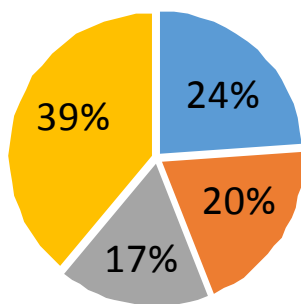
**For more information on GAPs,  
visit [www.gaps.cornell.edu](http://www.gaps.cornell.edu).**

# GAPS

Evaluations completed by participants on the first day of the GAPS trainings indicated that 13% of participants had a written farm food safety plan. By the end of day two, 48% of participants report having 50-100% of their farm food safety plans written. At the end of day two, participants were asked if they would recommend the training to others. Of those who completed the evaluations, all except one say they would recommend the training to others, with the one individual reporting "maybe".

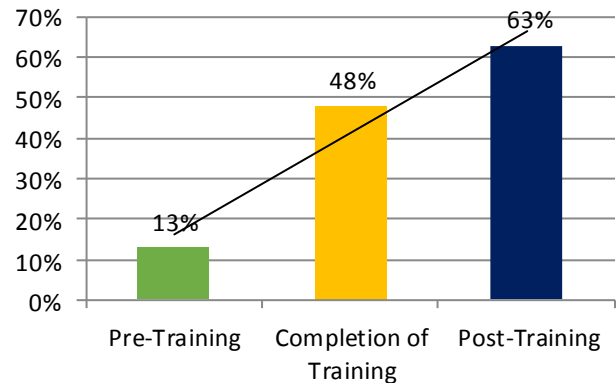
Of those responding to the long-term survey 63% (50/80) report having a written farm food safety plan and 38% (30/80) have completed a third party audit. Growers responding to the long-term survey had farms that varied in size from 0.25 acres to 4000 acres in fruit and vegetable production with a median size of 70 acres. They also reported having operations that included animals (28%) and having the public on their farm (32%), showing that growers from diversified farms and farms that direct market to consumers participated in both the GAPS trainings and the survey. This data highlights the progress that growers make during and after attending the workshop as well as the diversity of growers who have attended the multi-day trainings.

**The three top reasons growers report for implementing GAPS are their personal commitment to food safety (24%), maintaining market access (20%), and reducing liability (17%).**



- Personal Commitment to Food Safety
- Maintaining Market Access
- Reducing Liability
- All Other Reasons :
  - Gain Access to New Markets
  - Regulations related to FSMA
  - Receive Higher Prices
  - Reduce Buyer Rejection
  - Membership Requirement
  - Have Not Implemented FFS Plan

**Percent of Participants With Completed FFS Plan**



A frequent question asked by many growers is "How much will implementing GAPS cost?". This is a good but very complex question because it includes the time to develop the farm food safety plan, establish record keeping practices, train workers, and in some cases, hire more people or invest in infrastructure and equipment. This complexity means that no two farms will have the same costs, but it is a very important question so a large focus of the long-term survey was to try to estimate what types of costs growers have incurred as a result of implementing GAPS. We also thought it was important to ask growers what they thought GAPS would cost BEFORE they implemented any practices since the fear of what it might cost often impacts a grower's progress towards implementation. The initial analysis of the data shows that there is a positive gain for investing in GAPS, regardless of farm size, meaning that money spent implementing GAPS results in larger returns despite the initial and on-going costs. This benefit seems to be mostly due to increased market access. Unfortunately, we are still analyzing the data at this point, but we will report more specifically on the economic impact when it is finished.

## MARKET VALUE AFTER GAPS

Thirty five (43%) growers reported maintaining sales valued from \$14,000 to \$2,000,000, while 14 (16%) growers reported expanded sales valued at \$15,000 to \$300,000.

Based on the evaluations, both short and long-term, the multi-day GAPS training programs are helping growers increase their understanding of produce safety issues, develop a written farm food safety plan, and implement practices to reduce microbial risks. In New York State, there are many multi-day GAPS trainings scheduled for this winter if you would like to participate. Please visit [www.gaps.cornell.edu](http://www.gaps.cornell.edu) to find the dates, locations, and registration information. If you have any questions about the evaluation or surveys, please contact Elizabeth Newbold, [ejn22@cornell.edu](mailto:ejn22@cornell.edu) or 315-536-5123.