



**June 2009**  
**Volume 47 Number 3**  
**Article Number 3RIB2**

[Return to Current Issue](#)

# **How Master Gardeners View and Apply Their Training: A Preliminary Study**

**Marjorie Peronto**

Associate Extension Professor  
Hancock County Extension Office  
Ellsworth, Maine  
[mperonto@umext.maine.edu](mailto:mperonto@umext.maine.edu)

**Barbara Murphy**

Associate Extension Professor  
Oxford County Extension Office  
South Paris, Maine  
[bmurphy@umext.maine.edu](mailto:bmurphy@umext.maine.edu)

University of Maine

---

**Abstract:** Eight months after the 2006 Maine Master Gardener training, a statewide survey was sent to all 240 participants to determine to what degree they had adopted new gardening practices and what aspects of the program beyond horticultural instruction were most valued. Results showed a greater than 50% adoption rate for nine out of 16 horticultural practices as well as substantial personal growth and community enrichment. Master Gardeners expressed pride in having used their new knowledge and skills to assist others in need, a renewed faith in volunteerism, and a stronger commitment to environmental stewardship.

---

## **Introduction**

Gaining personal knowledge about plants and horticulture are primary motivators for participating in the Master Gardener program (Schrock, Meyer, Ascher, & Snyder, 2000; Rohs, Stribling, & Westerfield, 2002). A successful Master Gardener program should both improve participant knowledge and change participant behavior. Once participants are trained, do they actually follow through with the horticultural practices recommended in the course? To what degree do they pass the information they have learned on to others?

While some individuals participate primarily for personal gain and training, others clearly become involved for the opportunity to give back to the community (Mayfield & Theodori, 2006; Wolford, Cox, & Culp, 2001). Every graduate of the Maine Master Gardener training is required to contribute a minimum of 40 hours towards a volunteer project in order to receive certification. Volunteer opportunities vary from county to county and include creating educational materials and exhibits, responding to consumer horticulture questions, public speaking, fundraising, community beautification, assisting Extension faculty with horticultural research, and a variety of public outreach projects that focus on helping community members in need. Is today's Master Gardener volunteer experience a source of pride and personal growth for participants? What types of volunteer experiences are most meaningful to Master Gardeners?

In Maine, the focus of the Master Gardener training alternates each year. In odd-numbered years, the primary focus is on ornamental horticulture: growing flowering annuals, perennials, groundcovers, flowering shrubs, and trees. In even-numbered years, fruit and vegetable production takes center stage. Every year, the core topics of botany, soils, composting, pest management, and volunteerism are covered. Trainings are offered at the county level. Instructors teach to a set of competencies developed by a statewide program leadership team. However, each county educator has the freedom to add to the course to meet the specific needs of class participants. Training methods used include lectures, hands-on activities, and demonstrations.

In order to determine what behavior and attitude changes occurred as a result of participating in the Master Gardener program, we surveyed all 240 participants of the 2006 Maine Master Gardener Volunteer training. The purpose of this initial study was twofold:

- To determine what recommended horticultural practices were adopted by trainees and
- To learn how participants were personally affected by their involvement in the program, including their volunteer experience.

We initiated this preliminary study with expectations that the results would provide a direction for future research.

## Methodology

In 2006, the Maine Master Gardener training was conducted in ten counties, providing access to individuals from all geographic regions of the state. No distance education was used.

In December 2006, a pre-addressed, stamped survey was mailed to all 240 graduates of the spring 2006 Master Gardener training in Maine. One week prior to mailing the survey, a postcard was sent announcing a drawing for a gift certificate for those who completed the survey. A total of 123 people returned the survey, for a response rate of 51%.

The survey included 16 behavior statements and two open-ended questions. Respondents were asked to check all statements that reflected practices they adopted during the 2006 gardening season as a result of taking the Master Gardener training. The two open-ended questions asked respondents to identify the most important component of their entire Master Gardener experience and one accomplishment of which they were proud.

## Results and Discussion

### Behaviors Adopted

Table 1 presents horticultural practices adopted by respondents. Most highly favored practices included composting (76%), cultural pest management (69%), use of cover crops and mulches to prevent soil erosion (59%), and use of methods to extend the growing season (59%).

Ninety-two percent of those surveyed (113 people) adopted six or more of 16 practices taught during their training. In addition to implementing these horticultural practices, 95% of respondents (117) transferred information learned to others, as indicated by a separate survey question.

**Table 1.**  
Horticultural Practices Adopted<sup>1</sup>

<b>Horticultural Practices</b>	<b>Respondents</b>	
	<b>Number</b>	<b>Percent</b>
Started or improved my composting system	94	76%
Practiced cultural (non chemical) methods for managing pests	85	69%
Reduced soil erosion by using cover crops or mulches in the garden	73	59%
Used at least one new method to extend the growing season (plastic mulch, cold frame, floating row cover, appropriate variety selection, multiple plantings, etc.)	73	59%
Chose to grow varieties of vegetables, small fruits or tree fruits that were recommended by course instructors	66	54%
Successfully grew my own garden transplants from seed	66	54%
Pruned my small fruit or tree fruit plantings according to what I learned in the course	66	54%
Identified the insects in my garden before using control measures	66	54%
Identified plant disease symptoms before using control measures	63	51%
Chose disease resistant varieties for my fruit and vegetable plantings	60	49%
Had my soil tested	59	48%
Developed a planting plan for my vegetable garden which includes crop rotation	58	47%
Amended my soil according to test recommendations	50	41%
Based my choices of what vegetables to grow at least partially on their nutritional value	49	40%
Started a new vegetable garden	48	39%
Started a new fruit planting	43	35%
<sup>1</sup> "As a result of taking the 2006 Master Gardener Volunteer Training (check all that apply)" (123 surveys returned out of 240, 51% rate of return).		

## Responses to Open-Ended Questions

### ***What Was the Most Important Thing You Learned from Your Master Gardener Volunteer Course?***

Three broad themes emerged from the narrative responses to this open-ended question (Table 2). Not surprisingly, many respondents identified a specific horticultural skill as the most important thing learned. Others, however, placed the highest value on a new appreciation for the power of volunteering or an improved understanding of the concept of environmental stewardship.

#### ***Specific Horticultural Skill***

Forty-two percent of the respondents (52) listed a specific gardening skill as most important. In order of frequency, these skills included soil testing and amending, pest management techniques, composting, vegetable growing techniques, pruning, and garden planning.

#### ***Awakening to the Power of Volunteering***

Twenty percent of respondents (24) made a statement related to the power of volunteering. Typical responses included the following:

- "I learned just how good it felt helping others."
- "How much people working together can do"
- "How much can be accomplished by a group in the community"
- "The power of cooperative teamwork"

#### ***Strengthened Attitude to Environmental Stewardship***

Seventeen percent of respondents (21) made a statement that implied a shift in their perspective about their role as environmental stewards. Responses included statements such as:

- "The importance of taking care of the land and the environment"
- "The importance of beneficial insects in pest control and garden health"
- "Soils are an ecosystem that a good gardener manages."
- "The negative impact that the careless introduction of non-native invasive species is having on the environment"

**Table 2.**  
Most Important Things Learned<sup>2</sup>

Category	Respondents	
	Number	Percent
Specific horticultural skill	52	42%
Power of volunteering	24	20%
Strengthened attitude towards environmental stewardship	21	17%
Variety of other responses	26	21%
<sup>2</sup> (123 surveys returned out of 240, 51% rate of return)		

### ***Please Share an Accomplishment of Which You Are Proud, as a Result of the Master Gardener Program***

The majority of responses to this open-ended question fell under two broad themes. The highest percentage of respondents chose to describe accomplishments related to their volunteer work. Most others described something new that they achieved in their home garden (Table 3).

#### ***Accomplishments Related to Volunteer Work***

Forty nine percent of respondents (60) stated they were proud of an accomplishment related to their volunteer work. Projects where volunteers helped people in need were most frequently mentioned. Examples of pride in volunteerism included participation in community gardening projects to feed the hungry, gardening with disabled seniors ("garden angel" program), gardening with children, and community beautification.

Representative quotes included:

- "I worked with seven people who were elderly and had given up on their gardens. I worked with them to bring back some beautiful flower gardens. It was such a pleasure to see their excitement and joy."
- "It's very important to teach kids about growing their own food, and the positive impact local food can have on the planet and our bodies."
- "Sharing my knowledge from the Master Gardener Course with my neighbors and friends was a true accomplishment. Feeling confident about my knowledge was a real plus in interacting with people."

#### ***Home Gardening Accomplishments***

Thirty two percent of respondents (39) chose to highlight a home gardening accomplishment. Most frequently mentioned achievements were increased yields, the design and construction of new home gardens, and the use of new pest management methods.

Representative quotes included:

- "I was able to grow melons for the first time, using black plastic mulch. Also, I was able to use successive plantings to continue harvesting greens until the end of November. This has inspired me to build some cold frames and to start a garden at home and try to extend my gardening season to as close to year-round as I can."
- "I ate food I produced myself."
- "I planted 2 gardens this summer and made use of natural (grass clippings) mulch and plastic mulch (black and red) in both gardens, as well as landscape cloth. Pulling weeds was virtually non-existent and the amount of produce increased. The gardens also looked like something in a garden magazine - very professional and well done - I received lots of compliments."

**Table 3.**  
Accomplishments<sup>3</sup>

Category	Respondents	
	Number	Percent
Volunteer accomplishment	60	49%
Home gardening accomplishment	39	32%
Variety of other responses	18	19%
<sup>3</sup> (123 surveys returned out of 240, 51% rate of return)		

## Summary and Implications

The horticultural knowledge gained from the Maine Master Gardener program leads to immediate adoption of new practices and passing on of information to others. In addition to increasing knowledge and improving gardening practices, the Maine Master Gardener program instills self-confidence and pride in its participants. Volunteers appear to gain the most personal satisfaction when working on projects that benefit individuals in need. Growing a productive garden with fresh fruits and vegetables to share with family and friends is also a highly valued achievement. Finally, Maine Master Gardener program participants gain a broadened perspective of the role a gardener plays as a steward of the land.

The following implications can be drawn from the research reported here.

- The Master Gardener training is a vehicle for opening people's minds about environmental issues and ethics.
- The Master Gardener program has the power to excite people about making a positive difference in a community.

- Master Gardener program coordinators should strive to provide volunteers with opportunities to assist or empower community members in need.
- Group projects with immediate visible impacts are highly valued by Master Gardener volunteers.

## Opportunities for Further Research

This article summarizes the results of a study of the attitudes and accomplishments of 123 graduates of the 2006 Maine Master Gardener training, roughly 8 months after completing the training. It is a snapshot of the initial impact the 2006 Master Gardener program had on participants' attitudes and horticultural practices. It does not, however, provide insight into changes in attitudes and practices over time, nor does it address differences in attitudes and practices among those trained in other years.

The study gave rise to several more questions that will require the use of a more statistically rigorous survey tool over several consecutive years. How long do Master Gardeners stay in the program? Do volunteer hours increase or decrease from year to year? What are participants' initial motivations for taking the Master Gardener training? Can we link this initial motivation to whether or not they become committed long-term volunteers? As a result of the training, do participants utilize university resources more?

A new survey tool will be created to include both a pre-training profile and a revised post-training questionnaire. Each document will be coded, providing the ability to track individual participants systematically over time. On the first day of class, a pre-training profile will gather demographic information and baselines for current levels of volunteerism, frequency of use of Extension as a resource, motivation for taking the Master Gardener course, and current horticultural practices. The post-training questionnaire, administered at least 6 months after graduation, will be revised to allow future graduates to rank the degree of change in their attitudes and behaviors. This revised post-training questionnaire can then be linked with the new pre-training profile to quantify the extent of change.

## References

- Mayfield, C. A., & Theodori, G. L. (2006). Past and anticipated community involvement of Master Gardener trainees. *Journal of Extension* [On-line], 44(3) Article 3RIB8. Available at: <http://www.joe.org/joe/2006june/rb8.shtml>
- Rohs, F. R., Stribling, J. H., & Westerfield, R. R. (2002). What personally attracts volunteers to the Master Gardener program? *Journal of Extension* [On-line], 40(4) Article 4RIB5. Available at: <http://www.joe.org/joe/2002august/rb5.php>
- Schrock, D. S., Meyer, M., Ascher, P., & Snyder, M. (2000). Benefits and values of the Master Gardener program. *Journal of Extension* [On-line], 38(1) Article 1RIB2. Available at: <http://www.joe.org/joe/2000february/rb2.php>
- Wolford, M., Cox, K., Culp, K., (2001). Effective motivators for Master Volunteer program development. *Journal of Extension* (On-line), 39(2) Article 2RIB4. Available at: <http://www.joe.org/joe/2001april/rb4.php>

---

Copyright © by Extension Journal, Inc. ISSN 1077-5315. Articles appearing in the Journal become the property of the Journal. Single copies of articles may be reproduced in electronic or print form for use in

educational or training activities. Inclusion of articles in other publications, electronic sources, or systematic large-scale distribution may be done only with prior electronic or written permission of the Journal Editorial Office, [joe-ed@joe.org](mailto:joe-ed@joe.org).

If you have difficulties viewing or printing this page, please contact JOE Technical Support.