

2014 Gardening Program Evaluation Summary
MFH Project: Collaborating with Missouri Food Pantries for Better Health
University of Missouri – Interdisciplinary Center for Food Security
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The following report summarizes the results of the 2014 Gardening Program Post-test conducted September and October 2014. We surveyed 158 program participants in all four communities (St. James, Shelbina, Mexico, and Columbia) and estimate we captured data from 15-20% of all program participants. Of the 158 people who completed the post-test, 40 or 26.1% said they also completed the pre-test in the spring (this accounts for 23.5% of those who completed the pre-test).

Highlights from the 2014 Post-test include the following:

- *Feeling in control of their health and feeling in control of what goes into the food they eat* are important motivations for gardening among our participants.
- Eighty-seven percent of those surveyed reported planting a garden in 2014.
- Of those who did not plant a garden or whose garden failed, 91% said they plan to try again in 2015.
- Most think the program is useful, are grateful for the supplies and advice, and encourage us to “keep doing what [we’re] doing.”
- Fifty-one percent grew a *new to them* or different vegetable variety in 2014; 29% reported using a new gardening technique or practice.
- Seventy-one percent of gardeners worked in their garden either daily or two to three times per week.
- The vast majority (91%) of gardeners shared produce with friends, family, and neighbors.
- Approximately 75% of gardeners increased their gardening activity between 2013 and 2014 in these important areas: garden size, time spent working in the garden, garden productivity, freezing produce, canning produce, and sharing produce.

Basic Gardener Characteristics

- Much like the pre-test, most gardeners surveyed this fall were women (75.2%). The average age of respondents was 51 years. The average household size was 3.14 people.
- Most people had many years of gardening experience. Over half (61%) had gardened for 11 or more years while 33.9% of people had zero to five years of experience. About a third (32.2%) of the respondents saw themselves as “Intermediate” gardeners. Almost half (49.6%) rated their skills as “Expert”. The remaining 18.2% consider themselves “Beginner” gardeners.
- Garden size varied among the group with over half (65.8%) of gardeners reporting gardens of 400 square feet (approximately 20ft. by 20ft.) or smaller. Ten percent of the gardeners reported having gardens of 401-800 square feet; while almost a quarter of gardeners (24.2%) reported having gardens between larger than 801 square feet.

- Gardeners told us that *feeling in control of their health* and *feeling in control of what goes into the food they eat* were important motivations for gardening (mean score of 1.44 and 1.28, respectively, using a five point scale where 1 = Very important, 3 = Moderately important, and 5 = Of no importance).

Gardening Program Usefulness

We asked people to share their impressions of the usefulness of the gardening resources we provided during the season. Using a three-point scale (1 = Very useful, 2 = Somewhat useful, 3 = Not at all useful), most people rated our resources as “Very useful.” Mean scores averaged 1.34 for questions about our seed distribution, transplant distribution, gardening handouts (literature), gardening discussion or advice, and container gardening program. The garden seeds appeared to be the most memorable and impactful part of the resources offered. As in 2013, many people expressed gratitude for any and all of the resources provided and encouraged us to “keep doing what [we’re] doing.”



Mexico 4H/Youth Community Gardener

We also asked people about ways to improve our program or things we could do differently to provide more appropriate resources. In addition to people suggesting we simply maintain current project activities, 30 people mentioned that offering a greater quantity and variety of seeds, transplants, soil, and/or education could help. Other responses centered on us providing more gardening supplies generally ($n = 9$). Respondents also suggested that we expand our educational activities to include different topics ($n = 8$).

Gardening Follow-through and Performance

After taking our Grow Well Missouri seed packets and information, we sought to determine the extent participants followed through on their intentions to garden and learn more about their garden’s performance and any challenges they faced during the season.

- Of 156 valid responses, 136 people (87.2%) reported planting a garden in 2014.
- A total of 18 people (11.5%) were first time gardeners.
- Thirty-four people (21.8%) stated that their garden failed or that they didn’t plant a garden after picking up seeds, transplants, or educational materials.
 - The reasons reported for failure or not gardening included:
 - No tiller ($n = 5$)
 - Weather ($n = 5$)
 - Health problems ($n = 4$)
 - Moved ($n = 3$)
 - Poor soil/location ($n = 3$)
 - Animal/pest problems ($n = 3$)
 - Too busy ($n = 3$)
 - Too late in planting/didn’t grow ($n = 3$)

- Access issues ($n = 2$)
 - Factors outside of the individuals control ($n = 2$)
 - Of those individuals who did not plant a garden or whose garden failed, 90.6% plan to garden in 2015.
- In general, gardens were rated as just above “Somewhat productive” (mean = 3.9) using a five point scale where 1 = Poor, 3 = Somewhat productive, and 5 = Very productive.
- Sixty-two people (51%) grew a new type of vegetable or a different vegetable variety in 2014.
- Thirty-five people (29%) reported using a new gardening technique or practice in 2014.
- The biggest challenge faced by gardeners in 2014 was related to growing and production issues with particular vegetables (i.e. “my peppers never produced any fruits” or “my pumpkins never got big”) In total, 55 people reported having these types of challenges.
- Other challenges mentioned included:
 - General garden maintenance/performance ($n = 22$)
 - Personal limitations (physical, financial, knowledge) ($n = 12$)
 - Insect/Disease ($n = 6$)
 - Wildlife/Livestock ($n = 4$)
 - Environmental/Weather ($n = 4$)
 - Soil ($n = 4$)
 - Miscellaneous ($n = 2$)
 - None ($n = 8$)
- Gardeners frequently said there weren’t any specific gardening tools or supplies that would have helped with their 2014 garden (60 mentions).
 - Specific gardening tool or supplies identified that would have helped included:
 - Tiller ($n = 24$)
 - Soil/Compost/Manure ($n = 11$)
 - General Supplies ($n = 7$)
 - Hand Tools ($n = 5$)
 - Canner/Canning supplies ($n = 3$)
 - Miscellaneous ($n = 3$)
 - Fencing/Animal Control ($n = 2$)
 - Assistance in garden ($n = 2$)
- Most people worked in their garden either daily (39.3%) or two to three times per week (32.1%).

Sharing and Using Produce

Gardeners are generous. The vast majority (90.8%) shared produce with friends, family, and neighbors. Some shared with other agencies such as a senior center ($n = 7$) or a food pantry ($n = 9$). Almost all respondents used produce fresh from their gardens (97.5%). Almost half reported freezing (47.9%) and/or canning (47.1%) some produce.

Changes from 2013 to 2014

We were pleased to find that between 2013 and 2014, the majority of gardeners either increased or held constant on a number of measures related to gardening activity and productivity. The table below includes the results from six questions aimed at understanding gardeners' assessment of changes to the size of their gardens, time spent working in the garden, garden productivity, and freezing, canning, and sharing produce.

Changes between 2013 and 2014	Increased	Stayed the same	Decreased	Total
Garden size (<i>n</i> = 102)	36.3%	40.2%	23.5%	100%
Time spent working in the garden (<i>n</i> = 102)	30.4%	48.0%	21.6%	100%
Garden productivity (<i>n</i> = 102)	52.0%	21.6%	26.5%	100%
Freezing produce (<i>n</i> = 57)	57.9%	31.6%	10.5%	100%
Canning produce (<i>n</i> = 55)	50.9%	30.9%	18.2%	100%
Sharing produce (<i>n</i> = 95)	48.4%	27.4%	24.2%	100%



Kale Transplants

Conclusion

These evaluation results, plus two years of direct experience in the field continue to show the positive impact of Grow Well Missouri. On measures related to gardening activity, when participants were asked to compare their 2013 and 2014 gardens, 30% or more stated that in 2014 they increased the size of the garden, spent more time working in the garden, increased the productivity of their garden, or increased the amount of produce that was froze, canned, or shared with others.

We considered improvements in gardening skill using three different measures. First, we compared the average reported skill of gardeners from the pre-test (*n* = 145) with the average skill of only those gardeners who also completed a post-test (*n* = 32). We found that the mean score rose slightly from 3.26 in the pre-test to 3.47 in the post-test (where 1=Beginner, 3=Intermediate, and 5=Expert). We also looked at whether gardeners incorporated new vegetables or gardening practices in 2014. Of those who completed their gardens, 51% grew a new or different type of vegetable and 29% tried a new gardening technique or practice.

Our time working in communities with food pantry customers, volunteers, organizers, and community partners provides us with additional, anecdotal evidence of the value of Grow Well Missouri. We hear a variety of stories from customers about the direct impact of our program on their lives. People mention they wouldn't have a garden if not for the materials we provide. We hear about copious amounts of produce grown, eaten, shared, and preserved for the winter. We hear about the value of having us there as inspiration and motivation to keep their

garden going. We hear about innovative gardening techniques or practices employed to improve productivity.

From food pantry volunteers, organizers, and community partners, Grow Well Missouri provides a positive, out-of-the-ordinary approach to helping people be more self-sufficient and less reliant on donated food. People recognize the value of vegetable gardening from a nutritional standpoint and also for its ability to give people hope, improve self-esteem, and provide a better overall quality of life.

Moving forward, we plan to continue the container gardening program to reach new gardeners and the elderly, as well as offer new and different varieties of seeds and transplants. In terms of education, we recently added a seasonal, monthly newsletter that will be distributed in print and digitally. The content will include vegetable specific tips, general gardening maintenance ideas, and soil improvement strategies among other topics. We also plan to more clearly communicate distribution dates and hours with pantry customers especially in those pantries open more frequently.



Lemon cucumbers, Mexico Community Garden, 4H/Youth plot

Partnership development will remain an important component of our work. In particular, we plan to work closely with Master Gardener groups both locally and statewide in order to find ways to keep our work going in existing communities and find new communities that want to adopt the project on their own. We are scheduled to make a presentation at the statewide Master Gardener conference in September and plan to find other ways to spread the word and offer assistance to groups later in the fall.