

2015 Grow Well Missouri 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 2015 Gardening Program Post-test conducted during September, October, and November of 2015. The participants surveyed in Mexico (33), Columbia (42), Booneville (19), and California (27) represent approximately 18% of the maximum number of people who participated in the gardening program during peak participation months. Of the 46 people who completed the post-test in Booneville and California, 17 (37%) said they also completed the pre-test in the spring.

Highlights from the 2015 Post-test include the following:

- *Having a healthy diet, feeling in control of what goes into the food they eat, and having a source of fresh vegetables* as the top three motivations for gardening among our participants.
- Seventy-eight percent of those surveyed reported planting a garden in 2015.
- Of those who did not plant a garden or whose garden failed, 80% said they plan to try again in 2015.
- Most think that Grow Well Missouri is useful and express gratitude for the supplies and advice provided.
- Sixty-five percent grew a *new to them* or different vegetable variety in 2015; 44% reported using a new gardening technique or practice.
- Eighty-six percent of gardeners worked in their garden at least two to three times per week.
- The vast majority (84%) of gardeners shared produce with friends, family, and neighbors.
- At least one-half of gardeners increased or maintained their gardening activity between 2014 and 2015 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 (76.9%) this fall were women. The average age of respondents was 53. Their average household size was 2.94 people. Thirty-five percent had at least one child in the household (n=120).
- Most people had many years of gardening experience. Nearly half (49.4%) had gardened for 11 or more years while 36.7% had zero to five years of experience (n=79).
- Over a third (38%) of the respondents (n=79) saw themselves as “Intermediate” gardeners. Nearly the same amount (40.5%) rated their skills as “Expert”. The remaining 21.5% consider themselves “Beginners.”
- Just over half of gardeners (52%) reported that their skill improved by a little (27.3%) or a lot (24.7%) over the course of the season (n=77).
- Garden size varied among the group (n=78) with almost three quarters (71.8%) of gardeners reporting gardens of 400 square feet (approximately 20ft. by 20ft.) or smaller. Fifteen percent of the gardeners reported having gardens of 401-800 square feet; while 12.8% reported having gardens larger than 801 square feet. One-quarter of respondents (24.4%) increased the size of their garden compared to their 2014 garden.

- Gardeners identified a number of motivations for gardening and generally identified their gardens as Important to Very Important using a five-point scale where 1 = Very important, 3 = Moderately important, and 5 = Of no importance (n=76). During the pre-test, respondents from Boonville and California identified *saving money, feeling in control of what goes into the food they eat, and having a source of fresh vegetables* as their most important motivations for gardening (mean scores of 1.10, 1.29, and 1.31 respectively). During post-test surveys, gardeners from all sites identified *having a healthy diet, feeling in control of what goes into the food they eat, and having a source of fresh vegetables* as the most important motivations for gardening (mean scores of 1.26, 1.30, and 1.30 respectively).

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 to be very useful. Mean scores averaged 1.31 for questions about our seed distribution (n=71), transplant distribution (n=54), educational materials (n=62), gardening advice (n=36), and container gardening program (n=44). On average, transplants were rated as the most useful, followed by the seeds. Based on survey and anecdotal results, the container gardens (four gallon potted patio tomatoes) were very popular as well. Many people expressed gratitude for any and all of the resources provided.

We also asked people about ways to improve our program or things we could do differently in order to provide more appropriate resources (n=72). Many people (27.1%) said that we should just keep doing what we're doing and that no significant changes were needed. A number of people (25.7%) mentioned that offering a greater quantity or variety of seeds and transplants would help. Other responses centered on providing different gardening supplies (8.1%) and specific information on topics such as pest and disease control, soil, and composting (8.1%).

Of the gardening topics that people would like to learn more about (n=77), general garden maintenance and performance ranked highest (16.7%) followed by a variety of topics including insect and disease control, composting, and greenhouse or hydroponic growing (3.9% each). Most people (60.3%) indicated that no particular topics of interest came to mind.

Gardening Follow-through and Performance

For those participating in Grow Well Missouri, we sought to determine the extent to which people followed through on their intentions to garden and learn more about their garden's performance and any challenges they faced during the season.

- Of the 119 individuals surveyed that picked up seeds, transplants, or gardening materials, 93 people (78.2%) reported planting a garden in 2015.
- Of those 93 people, 14 (15.1%) reported that they planted a garden but it failed or was otherwise unproductive.
- Of the 79 respondents who reported a successful garden, 12 (15.2%) were first time gardeners.
- Of the 119 people surveyed, 26 (21.8%) stated that they didn't plant a garden at all.
- We kindly asked people to tell us the main reasons why they were unable to plant a garden or experienced unproductive gardens in 2015. The reasons reported included the following:
 - Access issues (e.g. did not have permission to plant, didn't have the space at home, etc.) (25.6%)
 - Weather (23.1%)

- Too busy (10.3%)
- Moved/ Housing in transition (10.3%)
- Health/Physical limitations (7.7%)
- Gardening Skill (5.1%)
- No tiller (5.1%)
- Too late in planting/didn't grow (5.1%)
- Animal/Pests (2.6%)
- Poor soil quality (2.6%)
- Shared Seeds (2.6%)
- It is important to note that of those who did not plant a garden or whose garden failed, 80% plan to garden next year.
- In general, gardens were rated as just above "Somewhat productive" (mean = 3.22) using a five-point scale where 1 = Poor, 3 = Somewhat productive, and 5 = Very productive.
- Forty-four people (64.7%) grew a new type or variety of vegetable in 2015; 30 (44%) tried a new gardening technique.
- The biggest challenge faced by gardeners in 2015 was related to vegetable specific problems (e.g. tomatoes didn't set fruit, carrots did not grow, etc.) (43.5%, n=79).
 - Other challenges mentioned included:
 - The weather (20.0%)
 - General maintenance or performance issues (17.7%)
 - Insect or disease issues (7.1%)
 - Wildlife (5.9%)
- Gardeners frequently said there weren't any specific gardening tools or supplies that would have helped with their 2015 garden (59.5%, n=76).
 - Specific gardening tool or supplies identified that would have helped included:
 - Tiller (16.5%)
 - Hand Tools (6.3%)
 - Soil/Compost/Manure/Fertilizer (5.1%)
 - General Supplies (3.8%)
 - Assistance or help in garden (3.8%)
 - Irrigation and related materials (3.8%)
- Most people worked in their garden either daily (38%) or two to three times per week (35.4%).

Sharing and Using Produce

Gardeners participating in the program continue to show generosity with their produce. The vast majority (84.4%) shared produce with friends, family, and neighbors (n=77). A few shared with other agencies such as the senior center (6.5%) or a food pantry (3.9%).

Almost all respondents used produce fresh from their gardens (98.7%, n=77). Approximately one-third of respondents (36.4%) reported freezing produce and 23.4% reported doing some canning. Reports of food storage are lower than previous year's post-test findings due in large part to weather related productivity challenges in the 2015 growing season.

Changes from 2014 to 2015

The table below includes the results from six questions aimed at understanding gardeners' assessment of changes in the size of their gardens, time spent working in the garden, garden productivity, and freezing, canning, and sharing produce.

Changes between 2014 and 2015	Increase (Frequency)	Increase (Percent)	Same (Frequency)	Same (Percent)	Less (Frequency)	Less (Percent)
		34.0%		27.8%		38.2%
Garden size (n=67)	21	31.3%	27	40.3%	19	28.4%
Time spent working in the garden (n=67)	19	28.4%	31	46.3%	17	25.4%
Garden productivity (n=67)	22	32.8%	14	20.9%	31	46.3%
Freezing produce (n=25)	9	36.0%	6	24.0%	10	40.0%
Canning produce (n=20)	8	40.0%	2	10.0%	10	50.0%
Sharing produce (n=59)	21	35.6%	15	25.4%	23	39.0%

It is notable that when compared to previous year's results, slightly fewer people in 2015 indicated that activities had increased or stayed the same. Based on comments from gardeners, it is clear that the erratic weather this year not only affected people's follow through but also diminished the overall productivity of their gardens. This had additional consequences on the amount of produce people shared, canned, and froze.

Conclusion

As reported above, most trends with gardening skill and activity among Grow Well Missouri participants are positive. Of those surveyed who completed a garden in 2015, 51.9% report that their skill as a gardener improved by a little or a lot over the course of the growing season. Despite challenging weather, between 50% and 75% of gardeners reported either increasing or holding steady on a number garden related activities ranging from spending time working in the garden to sharing produce with others. Additional reports indicate that people received a great deal of value and satisfaction from their gardens regardless of productivity. For many, time spent in the garden is time well spent.

The 2015 growing season was marked with many challenges to gardening. During the beginning of the planting season, gardeners faced prolonged periods of rain. Later in the season, prolonged hot and dry stretches required supplemental watering. Despite these obstacles, we believe that our project continues to make a positive impact on people's gardening activity. For new and experienced gardeners alike, the seeds and supplies provided a much-appreciated supplement to their household budgets. Educational materials and in-person consultation provided a chance to engage in conversation and share both basic and more advanced gardening concepts.

As we move into 2016, we plan to take closer look at the reported challenges and topics of interest from this survey. Consistent with previous years, people note a number of vegetable specific challenges that

hampered their success. In addition, given that weather was a major concern, along with general performance issues often related to weather, there is need to synthesize information related to garden resiliency (i.e. spacing, using compost and mulch, efficient watering, etc.). To address issues of access to land and garden space, it is possible that policy discussions with public housing authorities or private landowners could yield results. Where there is interest, we plan to continue offering our container gardening program.

We believe there is an opportunity to do more to reach new and beginning gardeners. More visual aids could help, along with a combination gardening manual/cookbook that includes gardening basics, vegetable specific tips, and seasonal recipes. Container gardening is an effective first step to raise people's interest and confidence. Transplants are also helpful given their high success rate compared to direct seeding. We will continue to work to increase local partnerships that contribute to building more community support for gardening and sustain project activities into the future.