Cultivating Change: Extension Educators' Innovative Community Gardening Practices for Food Access in Urban Low-Income Areas and Rural Food Deserts

Jenna Dyckman
Cache County Extension Office
179 N Main St #111, Logan, UT 84321
435-752-6263
jenna.dyckman@usu.edu

Emma Parkhurst
Davis County Extension Office
80 E. 725 S., Kaysville, UT 84037
435-919-1334
emma.parkhurst@usu.edu

Eva Timothy
Millard County Extension Office
83 Manzanita Ave., Delta, UT 84624
435-864-1483
eva.timothy@usu.edu

Kelsey Hall
Utah State University
ASTE
2300 Old Main Hill, Logan, UT 84322
435-797-3289
kelsey.hall@usu.edu

Cultivating Change: Extension Educators' Innovative Community Gardening Practices for Food Access in Urban Low-Income Areas and Rural Food Deserts

Introduction

The limited access to healthy food among vulnerable populations (VPs), whether due to cost or accessibility, is associated with lower consumption of fruits and vegetables and poor health outcomes (Vozoris & Tarasuk, 2003; Ziso et al., 2022). VPs include individuals or groups below a welfare threshold due to ethnicity, lower socioeconomic status, refugees, age, or food insecurity (Malberg Dyg et al., 2019). Through community gardens (CG), Extension programs can increase VPs' health and well-being, instill gardening independence by enhancing practical skills, and empower youth and adults to proactively shape their food landscapes, as emphasized in Egli et al.'s (2016) model, which highlights key benefits such as food security, community cohesion, ownership and pride, and physical activity (Barnidge et al., 2013). The intersection of low-income in urban areas and food deserts in rural communities created a need for innovative projects, such as CGs, that reach VPs in Utah (Feeding America, 2021).

How It Works/Methodology/Program Phases

Four CG programs, run by Utah State University (USU) Extension faculty in four urban and rural communities, aimed to address food security and food access in youth and adults of VPs. The CG programs target school-aged youth and families in food deserts and underrepresented or disadvantaged urban populations. We used a combination of lecture and experiential learning to increase participants' knowledge, skills, and confidence to grow a successful garden and use the vegetables grown to establish a healthy eating pattern. Various sources funded the programs, including USU Extension, the state SNAP-Ed program, local government, and a Specialty Crop Block Grant. Table 1 shows the steps to establish a CG program.

Table 1

Steps to Establish a Community Garden Program

Task	Task description
Identify partner	Find schools, city or county-owned spaces, and low-income housing locations possessing unused areas suitable for community gardening.
Research & assess space	Evaluate the identified space for the garden, considering sunlight, soil quality, accessibility, and existing infrastructure.
Develop garden plan	Create a plan integrating garden development, water management, and maintenance, addressing needs like raised beds and irrigation.
Educational planning & alignment	Use or adapt curricula, such as Ag in the Classroom, Jr. Master Gardener, Utah SNAP-Ed, and Utah Discover 4-H. Align activities to state educational standards to enhance gardening skills and complement academic goals.

Approach & proposal	Present your CG plan to partners and FFA programs, emphasizing the benefits of food access, education, and health and well-being. Be prepared to address questions or concerns from potential partners.
Advertising & solicitation	Develop messages to advertise the goals and educational benefits. Contact local agencies, FFA chapters, nurseries, lumber yards, and stores, seeking partnerships and resource donations for successful implementation.

Results to Date

The results reported from 2021-2023 are from the four CG programs: Youth Gardening in Rural Utah, Urban SNAP-Ed Adult and Family City Community Garden, SNAP-Ed Latino Community Garden, and SNAP-Ed Somali Refugee Community Garden. Key impacts from these four CG programs include the following:

- We distributed 653 lbs of food, serving 393 individuals through education, food sales, and donations.
- Latino participants (n = 19) met at the community garden once a week for 10 weeks and produced more than 200 lbs of produce.
- Participants increased knowledge of types of produce that grow well in their community (25%), confidence in growing and harvesting food (25%), and knowledge of how to prepare what they grow for consumption (50%).
- Youth participants demonstrated knowledge of when food is ripe for picking/preserving, how to use garden produce, and understood the health benefits (n = 25, 60%), respectively.
- One Somali refugee said, “I benefited from [the SNAP-Ed program] both mentally and physically. I am eating healthy food. I harvested a lot of vegetables [from the SNAP-Ed supported garden]. My sleep and my blood sugar improved.”
- In Cache and Millard counties, community organizations donated bags of soil, compost, seeds and transplants, wood chips, and stone for water conservation, maintenance, soil amendment, and food production.

Future Plans & Advice

We plan to expand programs through community partner collaborations to increase reach to VPs and establish more partnerships for ongoing support. These are key takeaways that could help other professionals implement innovative strategies in developing or sustaining CG programs:

- Keep the program simple and community-driven, focusing on a specific target group.
- Paraprofessionals, such as community health workers or employees of a nutrition education program, should be used to run the CG education program.
- For ongoing support, Foster collaborations with community members, school districts, and local businesses.

Costs & Resources Needed

The resources needed to start a CG program include land, infrastructure materials (i.e., lumber, pots, soil), gardening supplies (i.e., seeds, seed trays, shovels, hoses), education curriculum, community partnerships, water management supplies, and advertising materials. The cost of start-up resources for these community gardens, ranging from $200 to $7,000, varies depending on the location secured for the garden, the number of donations received, and the ability to use volunteers.

References

Barnidge, E. K., Hipp, P. R., Estlund, A., Duggan, K., Barnhart, K. J., & Brownson, R. C. (2013). Association between community garden participation and fruit and vegetable consumption in rural Missouri. *International Journal of Behavior Nutrition and Physical Activity, 10*(128). https://doi.org/10.1186/1479-5868-10-128

Egli, V., Oliver, M., & Tautolo, el-S. (2016). The development of a model of community garden benefits to wellbeing. *Preventative Medicine Reports*, 3, 348–352. https://doi.org/10.1016/j.pmedr.2016.04.005

Feeding America. (2021). Food insecurity among overall (all ages) population in [State]. https://map.feedingamerica.org/county/2021/overall/utah

Malberg Dyg, P., Christensen, S., & Peterson, C. J. (2019). Community gardens and well-being amongst vulnerable populations: A thematic review. *Health Promotion International*, 35(4), 790–803. https://doi.org/10.1093/heapro/daz067

Vozoris, N. T., & Tarasuk, V. S. (2003). Household food insufficiency is associated with poorer health. *The Journal of Nutrition*, *133*(1), 120–126. https://doi.org/10.1093/jn/133.1.120

Ziso, D., Chun, O. K., & Puglisi, M. J. (2022). Increasing access to healthy foods through improving food environment: A review of mixed methods intervention studies with residents of low-income communities. *Nutrients*, *14*(11), 2278. https://doi.org/10.3390/nu14112278