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The Development of a Backyard Composting Project Through Community Engagement

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Abstract. It can be argued that public forums are a valuable and essential tool for Cooperative Extension professionals. This article narrates the innovative use of the public forum action steps outlined in Kahl’s (2016) “A Convener’s Guide to Hosting a Public Forum”. The primary objective was to address illegal dumping and littering concerns with the Extension professional’s role to engage the community. The resulting “Backyard Composting Project” demonstrated that public forums are valuable in creatively engaging urban audiences. Ultimately the authors illustrate how a community concern can be addressed using innovative programming to reach what Extension considers to be non-traditional urban populations.

INTRODUCTION

In 2019, the Kentucky Cooperative Extension Service completed community needs assessments for each county in the commonwealth. A primary goal of these assessments was to identify citizens’ highest-priority issues and concerns. Statewide, more than 38,000 people completed the needs assessment survey. More than 500 interviews and focus group discussions contributed to this effort, and the information discovered assisted in developing county and state work plans.

Notably, Kentucky residents identified “illegal dumping and littering” as the top agricultural and environmental priority issue facing our state (University of Kentucky Cooperative Extension, 2019). For reference, Ingram County, Michigan, states that:

Garbage is a subset of solid waste and includes rejected food waste, animal, fruit, and vegetable wastes resulting from the handling, storage, sale, preparation, cooking, and serving of foods. The ability to address this issue reduces the risk of diseases carried by wildlife. (Ingram County, 2020, para. 1)

To address this concern, Extension Specialists recommend that plant and vegetable matter be composted,

Because it is an important way to reduce the waste burned or dumped in landfills. Yard wastes and vegetable scraps can make up as much as 20 percent of household garbage. Composting effectively recycles that waste into valuable organic matter that can be used as soil amendments and fertilizers. (Krogger, Sullivan, & Kropf, 2011, Introduction, para. 2)

“With proper management, these organic materials can be diverted from the waste mainstream and converted into compost.” (Kentucky Energy and Environment Cabinet, 2020, para. 1). Public forums seemed the obvious solution to effectively mitigate illegal dumping and glean community perspectives regarding composting.

CONVENING PUBLIC FORUMS: A SUMMARY

As noted by Kahl (2016), public forums can be an effective tool in gathering perspectives on community issues. Kahl goes on to emphasize that these events require the “formation of clear goals and careful design” to ensure that they meet their objectives. Table 1 outlines the seven planning steps recommended for a successful engagement process.

Table 1. Seven Planning Steps for a Successful Engagement Process (Kahl, 2016)

Step #	Action
One	Organize a planning team
Two	Determine the goals for the forum
Three	Identify a process facilitator
Four	Frame the issue
Five	Plan and advertise the event
Six	Host the event
Seven	Conduct follow-up

Kahl defines the role of public forum convener as:

The person who invites this small group of thoughtful, committed citizens to have a conversation on an important topic. The convener need not be the designated or positional leader. Convening a public event requires establishing clear goals for the event and careful design of a process to bring people together to reach the established goals. The process of convening, while often initiated by an individual, can be more effective when handled through the work of a group. (2016, para. 1)

PUBLIC FORUM DEVELOPMENT AND IMPLEMENTATION

In order to address community concerns regarding solid waste management utilizing the public forum format, the authors employed each of the seven steps outlined above as well as the “Convener’s Guide to Hosting a Public Forum” publication as a source of reflection and reference. Below, the authors provide and reflect on a step-by-step outline of the overall process activity.

Survey coordinators encouraged community members, partners, and the general public to complete a community needs assessment survey and provide a broad perspective on community concerns. In sum, 384 Campbell County residents responded, and 49% of respondents indicated that they currently participate in local Extension programs.

The second step of the county needs assessment was to facilitate a focus group. During the focus group process, 16 individuals provided in-depth feedback regarding community needs. Extension agents recruited these specific individuals because they had participated in Extension programs, had served on Extension Advisory Councils, or are currently important stakeholders in the community. To acquire diverse perspectives, 50% of focus group participants were familiar with Extension and 50% were not. Results from the focus groups clearly indicate a desire for Extension to address solid waste management issues like illegal dumping, littering, and composting.

The final phase of the assessment involved sharing results with the County Extension and Extension Environmental Advisory Councils. Both councils agreed with the need for and the importance of composting education.

Community forums such as these provide a platform for community buy-in and motivation to collaborate on issues of prominent community concern. In this case, the forum led to a meeting between various community leaders to discuss illegal dumping and littering in the community. Those involved included the:

- County Solid Waste Coordinator
- County Conservation District Coordinator
- County Extension Agent for Natural Resources and Environmental Management.

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Table 2. Application of Hill's Standard for the Evaluation of Innovation

Innovation Criteria	Proof of Innovation
Was the program novel (new)?	Yes, Campbell County Composting Education and Implementation Program was new.
Was the program useful?	Yes, 200 Campbell County households now possess compost bins and use them. Data was reported to the Extension Service through Qualtrics (online survey tool). 155 participants (78% response rate) indicated that the average household diverted 112 pounds of food waste from the landfill by composting in a nine-month period. 36 gallons of yard waste were diverted from the landfill as well. The average household made 28 gallons or 114 pounds of compost. They indicated using compost as a soil amendment/fertilizer in vegetable and fruit gardens, yards, and around trees and shrubs.
Was a new product introduced?	Yes, Earth Machine, 80-gallon compost bin.
Was a new process utilized?	Yes, drive-through events with one-on-one instruction using social distancing guidelines.
Were new audiences reached?	Yes, 71% of participants were first-time Extension users from urban communities

Each participant served a different role. The County Solid Waste Coordinator offered to design a survey to determine the public's interest in composting and to publicize the grants offered by the Kentucky Division of Waste Management. The County Conservation District Coordinator offered to partner with Extension to apply for grants to support composting programs that would provide Campbell County residents with compost bins, ultimately encouraging the implementation of composting.

The County Conservation District Coordinator and the Extension Service collaborated to form the Composting Education and Implementation program. The Conservation District Coordinator agreed to author the grant application and conduct necessary follow-up reporting. Extension agreed to provide composting education and to host the distribution programs. About \$3500 in grant funds were awarded, which allowed the group to purchase 100 compost bins and distribute them to Campbell County residents. The Campbell County Extension District Board and County Conservation District Supervisors funded 100 additional compost bins.

Due to COVID-19, the education and distribution programs were redesigned to be four separate "Composting 101 Drive-Through Events." Event organizers used both social media and print media to advertise the programs. Participants stayed in their vehicles, and the Extension Agent provided instruction from a safe distance on how to compost using the bin and follow safety protocols. Participants received user agreements obliging them to provide data on the amount of food waste diverted from the landfill and the amount of compost produced.

RESULTS

In total, the Composting Education and Implementation program educated 200 people regarding the environmental benefits of composting. Seventy-one percent of participants were first-time Extension participants, and 95% live in the highly urban Cincinnati/Northern Kentucky metro areas (United States Census Bureau, 2010).

Due to the participants' residence within an urban area and their lack of experience with Extension, coaches from the Kentucky Urban Extension Initiative Fellows Leadership Program identified this program as innovative in reaching non-traditional, under-served urban audiences. In the book "Collective Genius: The Art and Practice of Leading Innovation" Hill et al. (2014) set the standard for how innovation can be evaluated. Hill defines innovation as "the creation of something both novel and useful. It can be large or small, incremental or breakthrough. It can be a new product, a new service, a new process, a new business model or a new way of organizing" (2014, p.11).

Table 2 shows an application of these criteria to the Composting Education and Implementation program.

CONCLUSION

As world population increases and environmental changes occur, it can be argued that Extension's role within university outreach and engagement related to environmental protection is more important than ever. The documentation of Extension efforts to address natural resources and environmental management issues in urban areas is especially important. This information can be used to communicate to stakeholders just how relevant Extension is for urban audiences.

UF/IFS Extension emphasizes the importance of natural resources in their urban Extension mission statement (Warner et al., 2017). Extension does not have to be the expert on all issues, but Extension must be willing to engage with the community to strive towards implementing mutually-defined goals.

As Extension educators learn to develop and utilize public convening skills to address environmental and other “hot-button” issues, the authors expect to see great benefit. In the end, Extension can help make significant positive impacts on the environment in today’s communities.

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