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Exploring Extension Involvement in Farm to School Program Activities

Abstract

The study reported here examined Extension professionals' involvement in farm-to-school program activities. Results of an online survey distributed to eight state Extension systems indicate that on average, Extension professionals are involved with one farm to school program activity, with most supporting school or community garden programs. Results also indicate that Extension professionals are interested in being involved with an average of four farm to school program activities. Results demonstrate that each Extension program area is currently involved and is interested in supporting farm to school through a variety of different activities.

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Introduction

Through passage of the Smith-Lever Act, the Cooperative Extension Service (Extension) was initiated as a vehicle for human and community development through non-formal educational programs about subjects related to agriculture and home economics (Seevers, Graham, Gamon, & Conklin, 1997). Today, some Extension stakeholders are encouraging Extension to achieve these goals through educational programs that help redevelop local and regional food systems (Colasanti, Wright, & Reau, 2009; Conner, Cocciarelli, Mutch, & Hamm, 2008; Dunning, Creamer, Lelekacs, O'Sullivan, Thraves, & Wymore, 2012; Thomson, Radhakrishna, Maretzki, Inciong, 2006). Local and regional food systems are commonly described in terms of distance or geography, production methods, type of farm, and supply-chain characteristics (Martinez et al., 2010). Farm to school program activities are often thought of as a hallmark initiative that supports local and regional food systems. While there is a growing body of research exploring farm to school (Colasanti, Matts, & Hamm, 2012; Conner, Abate, Liquori, Hamm, & Peterson, 2010; Izumi, Wright, & Hamm, 2010a; Izumi, Wright, & Hamm, 2010b), no studies have specifically explored Extension's involvement in farm to school.

Farm to school is described by the United States Department of Agriculture (USDA) as including local and regional foods in school meals and providing complementary educational activities to students that emphasize food, farming, and nutrition (United States Department of Agriculture, 2013).

Similarly, the National Farm to School Network defines farm to school as a "program that connects schools (K-12) and local farms with the objectives of serving healthy meals in school cafeterias, improving student nutrition, providing agriculture, health and nutrition education opportunities, and supporting local and regional farmers" (National Farm to School Network, 2013).

Farm to school programs have been occurring on a small scale in some form for decades; however, the concept first began to emerge in the 1990s from the work of two different individuals and programs (Vallianatos, Gottlieb, & Haase, 2004). One of the first farm to school programs was an initiative started by a USDA consultant in Florida and was designed to support underserved minority farmers by establishing school districts as potential markets for certain crops. Additionally, another early farm to school program was an initiative launched by a school food service director at a low-income school in the Santa Monica-Malibu Unified School District in California. The Santa Monica-Malibu program focused on connecting a local farmers' market to school cafeterias through a fresh fruit and vegetable salad bar.

According to the USDA Economic Research Service, in 2001, there were six farm to school programs. By 2004, the number of farm to school programs had grown to 400, and by 2009, there were almost 2,100 documented programs (Martinez et al., 2010). In large part because of the growth in farm to school, in October of 2011, Representative Rush Holt of New Jersey introduced and the United States House of Representatives passed House Resolution 1655 formerly establishing October as National Farm to School Month (National Farm to School Network, 2011).

Purpose and Objectives

This article summarizes Extension involvement in farm to school program activities that support local and regional food systems and provide opportunities for cross programmatic collaboration. The research objectives were:

1. To determine with which farm to school program activities Extension professionals were currently involved.
2. To determine with which farm to school program activities Extension professionals would like to or are interested in being involved.
3. To determine with which farm to school program activities each Extension program area was currently involved or would like to be involved.

Methodology

Due to a lack of research on the topic, an instrument measuring Extension professionals' involvement in farm to school was not available. Therefore, the researcher created an instrument. The instrument was composed of four sections, and reasoned action theory (Fishbein & Ajzen, 2010) provided the conceptual framework for instrumentation. In one part of the instrument, respondents were asked to select with which farm to school program activities they were currently involved and with which farm to school program activities they were interested in being involved. The instrument also included a section asking for information about the respondent's location, primary program area, and position

within Extension. An expert panel made up of researchers and practitioners familiar with farm to school, Extension, and survey design reviewed the survey instrument. Leaders of the National Farm to School Network participated as part of the expert panel. Prior to data collection, a protocol, including the informed consent describing the study and instrument, was submitted to Virginia Tech's Institutional Review Board (IRB). The protocol was approved by Virginia Tech's IRB (Protocol #12-898).

The targeted respondents included 1,953 Extension professionals employed by eight state Extension systems during the fall of 2012. Respondents included individuals employed by the Alabama Cooperative Extension System, University of Alaska Fairbanks Cooperative Extension Service, College of Tropical Agriculture and Human Resources Cooperative Extension Service at the University of Hawaii, Louisiana Cooperative Extension Service, Ohio State University Extension, Penn State Extension, University of Tennessee Extension, and Washington State University Extension. These state Extension systems were selected as part of a convenient sample through email correspondence with each state Extension director. Each director agreed to help facilitate the administration of the instrument. The sample from six of the eight states included every Extension professional. The sample from Alabama only included 4-H youth development professionals, and the sample from Hawaii only included those professionals who volunteered to complete the instrument.

Data collection was performed using the Web-based survey software SurveyMonkey. Utilizing SurveyMonkey allowed the researcher to collect responses from the eight Extension systems at slightly different intervals and easily merge the data during the analysis phase. Following IRB approval, a pre-notice email with information about the study was sent by the Extension director to targeted Extension professionals in each state. Three to 5 days after the pre-notice, Extension professionals were contacted through an email asking them to complete the online survey. Extension professionals were contacted using one of two approaches. Extension professionals in Alaska, Hawaii, Ohio, Louisiana, and Tennessee were contacted using the automated SurveyMonkey data collection feature. Extension professionals in Alabama, Pennsylvania, and Washington were contacted by working with an administrative assistant, designated by the Extension director. Under both approaches, the message sent to potential respondents explained the goal of the survey and provided a URL to complete the online survey. Non-respondents were sent two follow-up reminders approximately 7 to 10 days apart. Data were analyzed using Statistical Package for Social Sciences (SPSS) Statistics version 20.

Results

In total, 931 of 1,953 online surveys were completed for a total response rate of 48 percent. Respondents from Ohio made up the greatest percent of the sample (23.7%). Ohio's response rate was followed by respondents from Pennsylvania and Tennessee (20.3% respectively), Louisiana (20.0%), Washington (7.8%), Alabama (4.0%), Alaska (3.0%), and Hawaii (0.9%). In a similar study that distributed an online survey to Extension professionals in eight states, Lamm, Israel, and Diehl (2013) received a slightly higher response (65%). Table one describes the respondents by state.

Table 1.
Respondents by State

State	Responses (n=)	Population (n=)	Response Rate (%)	Percent of Population (%)	Percent of Sample (%)
Alabama	37	182	20.3	9.3	4.0
Alaska	28	57	49.1	2.9	3.0
Hawaii	8	9	88.9	0.5	0.9
Louisiana	186	351	53.0	18.0	20.0
Ohio	221	628	35.2	32.2	23.7
Pennsylvania	189	510	37.1	26.1	20.3
Tennessee	189	407	46.4	20.8	20.3
Washington	73	600	12.2	30.7	7.8
Total	931	1,953	47.7	100.0	100.0

Within the sample, the majority of respondents identified themselves as female (n=409, 56.4%), while the minority identified themselves as male (n=362, 43.6%). The majority of respondents identified themselves as not Hispanic or Latino (n=815, 98.5%), while the minority identified themselves as Hispanic or Latino (n=12, 1.5%). Additionally, the majority of respondents identified themselves as white (n=771, 93%), with black or African American representing 3.1% (n=26). American Indian or Alaska Native, Asian, Hawaiian, or other Pacific Islander, and other were all represented minimally. The mean age of respondents was 50 years, while the median was 51 years. When asked how many years they had worked for Extension, the mean response of respondents was 15 years. The median length of service of respondents was 14 years, while the most respondents selected 1 year (n=82).

Within the survey, respondents were asked to identify their primary Extension program area. The highest number of responses came from those individuals who identified themselves as supporting agriculture and natural resource programs (n=351, 37.7%). The second most responses were by individuals who identified themselves as supporting 4-H youth development programs (n=250, 26.9%). The third most responses were by individuals who identified themselves as supporting the family and consumer science programs (n=117, 19.0%). Individuals who identified themselves as supporting community development programs provided the least number of responses (n=45, 4.8%). Another 7.9% (n=74) and 3.7% (n=34) of respondents indicated they had some other program area or that their program area was administration, respectively.

Respondents were also asked to identify their Extension program position. The majority of respondents stated they were an Extension agent or educator (n=474, 51%). The second most responses came from individuals who identified themselves as an Extension specialist (n=146, 16%). The third most responses came from individuals who identified themselves as Extension administration (n=137, 15%). Individuals who identified themselves as an Extension program assistant or program associate provided the least number of responses (n=104, 11%). Approximately 8% (n=70) of the respondents stated they had a position other than those listed.

Respondents were also asked to identify their service area or territory. The majority of respondents stated their service area or territory for providing education, training, or support was local (county or city) (n=509, 55%). The second most responses came from individuals who indicated their service area or territory was statewide (n=237, 26%). The third most responses came from individuals who indicated their service area or territory was regional (multi-county) (n=167, 18%). Approximately 2% (n=18) of the respondents indicated they had some other service area or territory for providing education, training, or support.

When respondents were asked with which farm to school program activities they were currently completing, the number one activity selected was "school gardens or community garden programs" (n=200, 21.5%). The farm to school program activity that the second most respondents stated they were currently involved in was "farm-based field trips for youth/ students" (n=115, 12.4%). The farm to school program activity that the third most respondents stated they were currently involved in was "market opportunities for farmers" (n=93, 10.0). The farm to school program activity that the fourth most respondents stated they were currently involved in was "farm/farmer-based presentations in schools" (n=68, 7.3%). The farm to school program activity that the fifth most respondents stated they were currently involved in was "community economic development" (n=65, 7.0%).

When respondents were asked with which farm to school program activities they were interested in being involved in, the number one activity selected was "school gardens or community garden programs" (35.0%, n=326). The farm to school program activity that the second most respondents stated they were interested in was "farm-based field trips for youth/students" (31.7%, n=295). The farm to school program activity that the third most respondents stated they were interested in was "farm/farmer-based presentations in schools" (26.3%, n=245). The farm to school program activity that the fourth most respondents stated they were interested in was "market opportunities for farmers" (24%, n=223). The farm to school program activity that the fifth most respondents stated they were interested in was "local food and farm curriculum development for schools" (23.4%, n=218).

From the list of farm to school program activities, 39% (n=365) of the respondents stated they were currently involved with at least one farm to school program activity. Respondents were found to be currently coordinating an average of one farm to school program activity. Additionally, from the same list of farm to school program activities, 72% (n=672) of the respondents stated that they were interested in being involved with at least one farm to school program activity. Respondents were found to be interested in coordinating or being involved with an average of four farm to school program activities. Table two summarizes the respondent's current involvement and interested involvement in farm to school program activities.

Table 2.
Involvement in Farm to School Program Activities

Farm to School	Current Involvement			Interested Involvement		
	Rank	Responses	Percent	Rank	Responses	Percent

Program Activity	(#)	(n=)	(%)	(#)	(n=)	(%)
School gardens or community garden programs	1	200	21.5	1	326	35.0
Farm-based field trips for youth/ students	2	115	12.4	2	295	31.7
Market opportunities for farmers	3	93	10.0	4	223	24.0
Farm/ farmer-based presentations in schools	4	68	7.3	3	245	26.3
Community economic development	5	65	7.0	11	129	13.9
Local food, agriculture, or health policy development	6	64	6.9	14	119	12.8
Local food and farm curriculum development for schools	7	49	5.3	5	218	23.4
Local food cooking in schools	8	44	4.7	6	207	22.2
Tastings with local food in schools	9	44	4.7	15	119	21.4
Composting programs at schools	10	40	4.3	8	157	16.9
Grant-writing to support farm to school programs or activities	11	38	4.1	10	132	14.2
Volunteer recruitment and development for farm to school activities	12	34	3.7	13	124	13.3
Training about on-farm food safety regulations for selling to institutional markets	13	33	3.5	18	102	11.0
USDA Fresh Fruit & Vegetable Program presentations in schools	14	30	3.2	7	159	17.1

Training and technical assistance for farmers to sell products to schools	15	28	3.0	16	111	11.9
Local food coordination/ procurement for schools	16	21	2.3	17	110	11.8
Local food aggregation and distribution development for schools	17	19	2.0	19	88	9.5
Farmers markets at schools	18	14	1.5	9	132	14.2
Local food recipe development in schools	19	14	1.5	12	126	13.5
Training about insurance regulations for selling to institutional markets	20	9	1.0	21	64	6.9
Local food coordination/ procurement for pre-k programs or daycare facilities	21	8	0.9	20	87	9.3

With each Extension program area having a different mission, Extension stakeholders may be interested to know how each program area is currently or interested in supporting farm to school. The number one current (22.8%, n=57) and interested (50.4%, n=126) farm to school program activity of respondents who identified themselves as supporting 4-H youth development programs was "school and community garden programs." The number one current farm to school program activity of respondents who identified themselves as supporting agriculture and natural resource programs was "school gardens or community garden programs" (21.1%, n=74). The number one farm to school program activity for respondents who identified themselves as supporting agricultural and natural resource programs with which they would like to be involved in was farm to school-related "market opportunities for farmers" (34.8%, n=122). The number one current (40%, n=18) and interested (44.4%, n=20) farm to school program activity of respondents who identified themselves as supporting community development programs was farm to school-related "community economic development." The number one current farm to school program activity of respondents who identified themselves as supporting family and consumer science programs was "school gardens or community garden programs" (20.3%, n=36). The number one farm to school program activity of respondents who identified themselves as supporting family and consumer science programs with which they would like to be involved in was "local food cooking in schools" (44.6%, n=79). Table three summarizes the respondent's involvement in farm to school program activities by Extension program area.

Table 3.

Involvement in Farm to School by Extension Program Area

Program Area *	Rank (#)	Involvement	Responses (n=)	Percent (%)
4-H	Current			
	1	School gardens or community garden programs	57	22.8
	2	Farm-based field trips for youth/ students	32	12.8
	3	Farm/ farmer-based presentations in schools	26	10.4
	Interested			
	1	School gardens or community garden programs	126	50.4
	2	Farm-based field trips for youth/ students	124	49.6
	3	Farm/ farmer-based presentations in schools	93	37.2
	ANR	Current		
1		School gardens or community garden programs	74	21.1
2		Market opportunities for farmers	53	15.1
3		Farm-based field trips for youth/ students	47	13.4
Interested				
1		Market opportunities for farmers	122	34.8
2		Farm-based field trips for youth/ students	108	30.8
3		School gardens or community garden programs	97	27.6
CD	Current			
	1	Community economic development	18	40.0
	2	Market opportunities for farmers	14	31.1
	3	School or community garden programs	11	24.4

		Interested	
	1	Community economic development	20 44.4
	2	Market opportunities for farmers	15 33.3
	3	School or community garden programs	12 26.7
FCS		Current	
	1	School gardens or community garden programs	36 20.3
	2	Tastings with local food in schools	27 15.3
	3	Local food cooking in schools	25 14.1
		Interested	
	1	Local food cooking in schools	79 44.6
	2	Tastings with local food in schools	70 39.5
	3	USDA Fresh fruit and vegetable program presentations in schools	61 34.5
* 4-H=4-H Youth development professionals; ANR=Agriculture and natural resource professionals; CD=Community development professionals; FCS=Family and consumer science professionals.			

Conclusions and Recommendations

The study reported here is a first attempt to understand how Extension professionals are currently involved and have interest in future involvement with farm to school programming. Respondents were found to be currently involved with an average of one farm to school program activity and interested in being involved with four farm to school program activities. The difference between current involvement and interested involvement may be because some Extension professionals lack the expertise to be involved with farm to school program activities. An implication for Extension administrators is the opportunity to support new professional development programs that provide training and resources to help increase current farm to school program activity. The desire of Extension professionals to be involved with farm to school may be an opportunity for Extension to engage new audiences or community partners to further its organizational reach. Another implication is that other farm to school-related stakeholder groups such as the USDA, National Farm to School Network, and their collaborating groups may want to reach out to Extension as potential partners.

Survey results found that over half of all respondents (56.5%, n=526) were currently involved or interested in coordinating school gardens or community garden programs. When examining farm to school program activities by Extension program area, school gardens or community garden programs were listed in the top three current farm to school program activities for each Extension program area.

Additionally, school garden or community garden programs were listed in the top three for three of the four program areas in terms of interest. These findings reveal that school garden or community garden programs are how most Extension professionals are currently involved or interested in supporting farm to school. Additionally, these findings suggest that school gardens or community garden programs are important to Extension's diverse audiences and that Extension professionals believe school gardens or community garden programs are important to achieving desired program outcomes and impacts. These findings also indicate that school garden or community garden programs are one area in which interdisciplinary collaboration can occur across the different Extension program areas. While school garden or community garden programs were found to be the farm to school program activity that promoted the most cross programmatic collaboration, additional cross programmatic collaboration opportunities can occur through other farm to school program activities.

Many of the open-ended survey responses encouraged Extension to further explore farm to school as a focus area and for Extension to devote more resources to supporting farm to school program activities. One respondent from Alaska summed up this belief by writing, "Extension could, and should, play an important part, particularly in the educational roles for youth and adults. Extension can be the go-to place for resources, collaborative opportunities, and research based information (in farm to school)." Another respondent from Alabama felt similarly and stated, "I feel that Extension should and can play a crucial role in connecting local farm products to school cafeterias, developing school gardens, and developing farm to school experiential learning programs..." In conclusion, results of the study demonstrate that farm to school is an emerging program area for Extension to support the redevelopment of local and regional food systems.

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