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Thinking Collectively: Using a Food Systems Approach to Improve Public Health

Abstract

A nation can only be as healthy as its people. The daily news reminds us that we are overweight and obese and are suffering from preventable chronic diseases and that our country cannot sustain the level of health care costs through the next few decades. Extension professionals have the knowledge and experience to examine our food system closely and carry the momentum to promote healthy sustainable food systems aligned with our national guidelines. The goal is to create linkages among food systems, public health, and sustainable agriculture in order to achieve healthier eating and healthier communities.

Kathleen T. Morgan
Professor/Chair
Department of Family
and Community
Health Sciences
morgan@njaes.rutgers.edu

Nurgul Fitzgerald
Assistant Professor
Department of
Nutritional Sciences
nfitzgerald@aesop.rutgers.edu

Rutgers, The State
University of New
Jersey
New Brunswick, New
Jersey

Introduction

Extension professionals are experts in food systems and public health issues. In the past, Extension as a whole has not always been in the forefront of bringing together public health, food, and agriculture policy experts to determine how agriculture and food policy can impact healthy eating, chronic disease, obesity, and related health issues. As Extension professionals, we need to take a macro and micro view of our current food system and determine how we can develop a systems approach that would support an integrated health-based and sustainable food system.

The recent obesity and chronic disease rates provide a stark reality of the necessity to promote environmental and policy change.

- Childhood obesity has more than doubled in the United States (U.S.) in the past 30 years (CDC National Center for Health Statistics, 2013; Ogden, Carroll, Kit, & Flegal, 2012).
- Seven of the top 10 causes of death in the U.S. are chronic diseases such as heart disease, cancer, chronic obstructive pulmonary disease, and diabetes (CDC National Center for Health Statistics, 2013).
- Many chronic diseases can be prevented by being physically active, following a healthy diet, and not smoking (CDC, National Center for Chronic Disease Prevention and Health Promotion, 2010).

Nutrition policies like the Dietary Guidelines for Americans are designed to improve the nutritional status of

the nation; yet few adults and children consume diets that meet these guidelines. Adults and children do not consume adequate amounts of vegetables, fruits, whole grains, or calcium-rich foods, and they easily over-consume calories, total fats, saturated fats, added sugars, and sodium (Dietary Guidelines, USDA & HHS 2010).

While most Americans' diets need improvement, where people live can make a big difference in their health status. A person's zip code is an indicator of their access (i.e., availability and affordability) to healthy foods. Communities with poverty and low economic resources face health disparities, which in turn are linked to a higher prevalence of diet-related chronic diseases and obesity (Story, Hamm, & Wallinga, 2009).

Much attention has been given to obesity and chronic disease prevention over the past decade. Numerous associations like the Robert Wood Johnson Foundation, American Public Health Association, American Medical Association, Academy for Nutrition and Dietetics, American Heart Association, Cancer Society, USDA/DHHS, and others provided grants and programs to begin to ameliorate these health issues. Further, national prevention strategies point out the need for cross-sectoral, multidisciplinary, and system level prevention (National Prevention Health Promotion and Public Health Council, 2011).

The Food System

Aptly summarized by Stephenson and Sohm-Lawson,

The term food system is used most often in discussions about nutrition, food, health, community economic development and agriculture. The food system includes all processes involved in keeping us fed: growing, harvesting, processing, packaging, transporting, marketing, consuming and disposing of food and food packages.

Because it also includes the required inputs and generated outputs at each step, "the food system operates within and is influenced by social, political, economic and natural environments" (Stephenson & Sohm-Lawson, 2013). The comprehensive nature of this approach makes it pertinent to a wide range of Extension professionals' work in agriculture, nutrition and health, family wellness, community development, policy, research, and education.

A systems approach is much needed to not only think about but to act on issues related to food and health. A food systems approach will encourage strong consideration of the numerous factors involved in getting food from farm to consumer. This approach, including food production, processing, distribution, acquisition, preparation, and consumption, is intended to engage farmers, workers, consumers, governments, institutional purchasers, and communities who participate in that system (Story et al., 2009).

For a complex food system approach to be effective, it must be able to define the various sectors of the food system and understand that no one sector can stand alone. It is in their functioning in a system that the multiple inputs and outputs, such as "health" and other significant outcomes, will emerge from the system as a whole and can provide numerous benefits to consumers, agriculture and society (Story et al., 2009).

In 2010, Georges Benjamin, M.D., FACP, Executive Director of the American Public Health Association stated,

A healthier, more sustainable approach to our food system would not only ensure better health outcomes, but would reduce our growing chronic disease burden, minimize the impact on the environment and workers, and more equitably distribute nutritious foods to communities across the nation.

Extension and Food System

Nationwide, the Extension network is well positioned to be in the forefront of utilizing food systems approaches. This suitability is based on strengths such as:

- Extension professionals' topical expertise, ranging from agriculture, energy, waste management, and economics to nutrition, health and community development;
- Research and evidence-based programming;
- Nationwide network of professionals engaged in the communities where they work; and
- Ability to effect change on a state, regional, or national scale through the Extension network.

We must also note the ongoing changes and challenges facing Extension. Ever increasing availability of and easy access to information through technological changes seem to have influenced the value of information that Extension has been providing. In addition, similarly increasing budgetary burdens have been making it even harder to maintain the existing Extension model. As a result, it became a necessity for Extension to transform itself from the traditional, local expert model of outreach into a more system-focused organization. These transformations can be realized through online networks such as eXtension (King & Boehlje, 2013), infrastructural changes, capacity-building, and multidisciplinary collaborations (Bowen-Ellzey, Romich, Civittolo, & Davis, 2013; Gillespie, Gantner, Craig, Dischner, & Lansing, 2003; Raison, 2010). A parallel change in communication methods to enable and support collaborative participation is also necessary for successful food systems approaches (Gillespie & Sung, 2013).

Previous literature suggests a high level of interest in food systems both among Extension professionals and communities they serve (Perez & Howard, 2007; Thomson, Radhakrishna, & Bagdonis, 2011). Compacted by the current changes and challenges that Extension is facing, this seems to be the opportune time to examine our Extension research and outreach practices to develop methods that would support an integrated health-based and sustainable food system.

Recommendations for a Healthy, Sustainable Food System

1. Identify research opportunities to develop potentially successful public and private policy interventions within the food system and agriculture sector that will:
 - a. Promote healthy diets that are as local as feasible, and reduce child and adult obesity;
 - b. Address health disparities by developing equal access to healthy food in communities across America;
 - c. Promote diversification of agricultural production in scale, practices, products grown, and farmers in communities across America (Story et al., 2009).
2. Urge the public health community to increase its engagement in food system issues and to educate policymakers, media, and food industry about public health, nutrition, and solutions associated with the food system.
3. Urge Congress to include sustainable agriculture and other public health goals in the Farm Bill, Child

Nutrition Act, and other relevant legislation.

- a. Support environmentally sound agricultural practices to reduce contamination, natural resource use, climate change, and work-related injury/illness.
 - b. Promote comprehensive food safety policies, including addressing root causes of food contamination.
 - c. Promote equity in the food and agriculture industries (American Public Health Association 2010).
4. Explore community-wide and cross-sectoral collaborations to be able to address the system-wide issues. These collaborations often require effective communication between sectors within (e.g., collaboration between agriculture and nutrition/wellness experts) and outside the Extension network and will likely involve a wide range of stakeholders-academic and industry professionals, farmers, legislators, community organizations and advocates, and consumers.
- a. Integrate capacity-building into Extension practice to help support community level sustainability.
 - b. Assist stakeholders to develop a food policy council, which can help with improving the food system issues in the target community. Numerous resources about forming food policy councils are available (Broad Leib, 2012; Fitzgerald & Morgan, 2014; Harper, Shattuck, Holt-Gimenez, Alkon, & Lambrick, 2009).

Conclusion

Current consumer interests, persistent changes in ways that consumers access and use information, budgetary and funding constraints, and state of knowledge for health promotion and chronic disease prevention strategies all point to the need for multi-disciplinary, cross-sectoral, and/or food systems approaches. Extension professionals in all areas can be strong catalysts in improving food systems and public health. Extension has the framework and infrastructure to play a significant role in the health of all Americans. Identify your strengths and skills relating to the food system, build partnerships, and just begin!

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