Growing Solutions

Cultivating Health and Food Security Through Food Gardening in Iowa

Food Access & Health Work Group of the Iowa Food Systems Council

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The Iowa Food Systems Council is a member-based non-profit organization whose charge is to monitor Iowa’s food and health landscape, encourage and coordinate connections between food system leaders and decision-makers, and identify policies, programs and research that cultivate a resilient and sustainable food system - a system which builds a healthier food economy, a healthier environment and healthier Iowans. For more information go to www.IowaFoodSystemsCouncil.org.

The Food Access & Health Work Group is a vibrant statewide network of food and nutrition assistance program administrators, emergency food system providers, public health professionals, community-based organizers and food system stakeholders focused on cultivating a diverse and just food system that eliminates hunger, increases access to nutritious food, and improves the health of all Iowans. For more information go to www.IowaFoodSystemsCouncil.org/food-access-health/.

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Where Iowans live, work and play have a tremendous impact on their health. Healthy communities require addressing the underlying causes of poor health rooted in social, economic, and physical conditions that determine an individual’s health risks and opportunities. A key component of maintaining the wellbeing of Iowans, and the communities in which they live, is regular access to safe, nutritious and affordable food throughout life. Yet, hunger, food insecurity and poor diet continue to deteriorate the health of Iowans. One solution to this health crisis is to encourage all Iowans to grow some of their own food.

When gardeners are asked why they grow vegetables and fruit, responses are often, “I like to work outside,” “I like the taste of fresh food,” “It saves me money on my grocery bill,” and “It’s rewarding to start something from seed, watch it grow and produce delicious food.” Although a rising number of Iowans are growing food, food gardening can play an even greater role in strengthening individual, household and community food security while improving the health of all Iowans.

In December 2011, the Iowa Food Systems Council’s Food Access and Health Work Group received A Healthy Communities Grant from The Wellmark Foundation. The two-year grant is focused on building food security, self-sufficiency and improved health by increasing household, community, school and workplace food gardens across Iowa through integrated assessment, messaging and outreach strategies. This initiative stems from recommendations in the report Cultivating Resilience: A Food System Blueprint that Advances the Health of Iowans, Farms and Communities.
Iowa Food Gardening Social Marketing Initiative

The primary objectives of the Iowa Food Gardening Social Marketing Initiative include:

1. **Coordination**: To convene a statewide Food Access and Health Work Group to address food insecurity, hunger and public health issues in Iowa using a community-based food system framework;

2. **Social Marketing**: To assess, develop, implement and evaluate an Iowa Food Gardening Social Marketing Initiative that encourages:
   a. Low-resource Iowans to engage in food gardening activities; and
   b. Home, community, faith-based, school and workplace food gardeners to plant and/or pick extra vegetables and fruit to donate to a food pantry or food bank in their community.

The purpose of this document is to outline the health, economic, social and environmental benefits of food gardening in Iowa from individual, household, organizational, community and public policy perspectives.

**Hunger and Poor Health**

A key component of maintaining the wellbeing of Iowans, and the communities in which they live, is regular access to safe, nutritious and affordable food throughout life. Yet, the current status of hunger, food environments and diet are deteriorating the health and wellbeing of Iowans. For example:

- **More Hungry Iowans**. A growing number of Iowans do not have regular access to safe and nutritious food due to lack of resources and geography. More than 12% of Iowa households have low or very low food security (hunger). This represents a 4% increase in ten years and disproportionately affects households with children. Lack of access to foods that promote health are underlying factors for chronic disease.

- **Poor Nutrition**. Fruit and vegetable consumption is a proxy for good health, yet only 13% of Iowans eat fruits and vegetables five times per day and 9% of adolescents eat fruits and vegetables five times per day.

- **Lower Life Expectancy and Skyrocketing Healthcare Costs**. More than two-thirds of Iowans are overweight or obese. Since 1996, there has been a 60% increase in diabetes in Iowa. Researchers predict that because of the dramatic rise in obesity and chronic diseases, especially among young people, Iowans may witness a decline in life expectancy by as much as five years over the next few decades. Iowa children may have a shorter lifespan than their parents.

The economic costs related to the poor health of Iowans are skyrocketing. In 2009, Iowa’s direct costs attributable to obesity were estimated to be $783 million and are projected to double by 2018. Medicaid and Medicare pay up to 50% of these costs.

- **Disconnected Food System**. Food that is grown in Iowa impacts food access, diet and health. Iowa agriculture ranks 42 and 38 in vegetable and fruit production, respectively. Iowans extensively rely on other states and countries for foods that promote health. Approximately 85% of the food consumed by Iowans is imported to the state.
A Food Gardening Social Ecological Model

Food systems, social and built environments and policies have a major role in guaranteeing that healthful foods are the easiest choices for all Iowans. One solution is food gardening. Food gardening is the practice of growing and cultivating vegetables, fruits and herbs for household consumption. Food gardening can range in scale from a windowsill, container, patio, rooftop, and backyard to community gardens.

Gardening differs from farming in size and intent. Food gardens are often small scale and are grown by individuals to feed themselves and their family. Farms are larger in scale and the food that is grown is sold to individuals (farmers’ markets, CSA), institutions (schools, hospitals, cafeterias) or processors.

Food gardening can simultaneously lessen the impact of food insecurity, poor health, declining economy, environmental degradation and social problems. A social ecological approach connects these levels by, “offering a theoretical framework for understanding the dynamic interplay among persons, groups, and their sociophysical milieus.”

Applying a socio-ecological model to food gardening establishes a system of linkages between individuals, households, organizations, communities and public policy and the impact food gardening may have on food access/security, health, economic, environmental and social issues (Figure 1).

**Public Policy.** Local, state or federal policies and laws that support and increase food gardening practices

**Community.** Social networks or norms that establish coordinated efforts of all members of a community (e.g., organizations, community leaders, citizens) to support and engage in food gardening

**Organizational.** Rules, policies, practices and built environment of an organization (e.g., school, child care center, worksite, hospital, faith organization) to promote food gardening practices

**Household.** Interpersonal and social supports such as family and friends that provide food gardening support

**Individual.** Motivating change in individual behavior by increasing knowledge or influencing attitudes or beliefs of food gardening

*Figure 1. Food Gardening Social Ecological Model*
Individual Benefits of Food Gardening

The first step in motivating change within individuals is to increase exposure to food gardening, thereby increasing knowledge and developing a willingness to grow food (Figure 1). Regardless of what spurs the change in attitude towards food gardening, there are numerous individual benefits. For example, food gardening:

• **Increases access to healthful food and improve nutrition.** Food gardening increases access to healthful food. As more homegrown foods are available for meals or snacks, fruit and vegetable consumption increases.\(^{13}\) Children who grow food are more likely to eat fruits and vegetables, have a greater knowledge about healthy foods, continue healthy behaviors as adults, and have a longer life expectancy.\(^{14,15,16,17,18}\)

• **Lowers consumption of artificial ingredients.** Food gardening puts fresh, health-promoting foods on Iowans’ plates, thereby replacing highly processed foods that contain colorings, additives, and preservatives.

• **Increases physical activity.** Gardening burns calories and provides aerobic and strength-building exercises.\(^{19,20,21}\)

• **Improves mental health.** Research has found that gardening reduces stress, enhances emotional health and increases engagement among patients with dementia.\(^{22,23,24}\)

• **Decreases diseases and health care costs.** Food gardening offers the combination of nutrition and physical activity that can help prevent and control obesity, diabetes, heart disease and some types of cancer. Researchers believe that those who garden have aesthetic experiences that perpetuate engagement in other positive health activities.\(^{25}\) The positive health outcomes and lower health care costs are not just for individuals involved with gardening but also for household members who do not garden.\(^{26}\)

• **Improves quality of life.** Food gardening supports a higher quality of life, especially in the elderly.\(^{27,28}\) Gardeners often report higher energy levels, optimism and life satisfaction.\(^{29,30}\)
Household Benefits of Food Gardening

The impact of food gardening extends to interpersonal and social constructs such as family and friends. These benefits at the household level may include:

• **Lower food budgets.** Food gardens offer economic savings and financial security for households looking to put fresh, healthy and affordable foods on the table.\(^{31}\)

• **Improved household food security and self-sufficiency.** Populations who are at risk of food insecurity have unique needs, patterns of food insecurity and health risks.\(^{32}\) Food gardening empowers lifetime skills in meeting basic human needs while increasing access to safe and nutritious foods.\(^{33}\)

• **Stronger family bonds.** Gardening provides multi-generational learning, maintains cultural food traditions, and transfers food gardening, cooking and preservation skills to the next generation.\(^{34}\) Culture, values and beliefs influence individuals’ participation in community gardening projects.\(^{35}\)

• **Transferred knowledge.** Growing food offers opportunities to teach and learn about horticulture, nutrition, healthy eating, physical activity and healthy lifestyles.\(^{36}\)

• **Growing more gardeners.** Less than 26% of households in the Midwest have a home garden.\(^{37}\) A recent survey indicated that almost 60% of Polk County food pantry consumers do not grow food to eat but 34% would like information on growing food.\(^{38}\) Gardens not only grow healthy foods, but also the next generation of gardeners and farmers. Many of today’s new farmers did not grow up on farms, but had their first taste of farming in a backyard garden.
Organizational Benefits of Food Gardening

Procedures, practices, rules and the physical environment of an organization can promote food gardening. Schools, childcare centers, worksites, hospitals, and faith organizations can enact strategies that promote food gardening practices. The benefits of integrating food gardening concepts and activities into organizations include:

- **Increased active learning.** Children who garden become stronger, more active learners and have greater capacity to think independently.  
  39,40,41

- **Stronger school curriculum.** School gardens improve instruction across the curriculum, encourage physical activity and provide a place to apply learning, not only the ABCs, but science, health, food systems and community service.  
  42,43

- **Healthier food environments.** Daycare, school, workplace, home and community gardens provide places to teach and reinforce healthy eating, nutrition and lifestyles.  
  44 Food gardens located at hospitals and long-term care facilities support healthy eating messages while serving fresh and healthful foods on patient and customer plates.

- **Reinforced community food safety net.** Government, faith, community and volunteer-based organizations are rising to meet the needs of low-resource individuals by growing gardens and donating fresh produce to local food pantries and meal sites.  
  45,46,47,48 This enables food pantries to offer fresh food through the emergency food system.

- **Improved employee wellness.** Food gardening as a worksite wellness initiative is a strategy to reduce stress and decrease health care costs, while boosting camaraderie, team building and morale.  
  49,50 Employee-grown food gardens offer employees new skills, leadership development and community connections such as donating garden produce to a local food bank.
Community Benefits of Food Gardening

Community benefits of food gardening emerge as a result of social networks or norms that coordinate and support efforts of all members of a community (e.g., individuals, households, organizations, community leaders) to encourage and engage in food gardening. Examples of the community benefits of food gardening include:

- **Enriched civic engagement and social capital.** Home and community food gardens foster civic engagement, revitalize neighborhoods and promote community health.\(^{51,52,53,54}\) Gardens boost social capital by improving neighborhood safety and community cohesion by fostering peace and healing across racial and economic divides and revitalizing broken communities.\(^{55,56,57,58}\)

- **Community food security and resilience.** Growing food closer to Iowans’ plates lessens dependence on national and global food supply chains for the provision of healthy foods. Food gardeners may donate surplus produce to food pantries, soup kitchens and shelters further strengthening the emergency food system within a community.\(^{59}\)

- **Increased property values.** Not only do community gardens provide increased food access to healthful foods, but they have also been shown to increase property values.\(^{60}\)

- **Connection with nature.** Growing food encourages eaters to interact with nature for a regular dose of ‘Vitamin N’ which fosters nurturing, stewardship and conservation. A connection to nature deepens understanding of natural ecosystems and enhances ecological literacy.\(^{61,62,63,64,65}\)

- **Improved conservation.** Food gardens when paired with native perennial plants, such as prairie plantings, attract beneficial insects and pollinators while stabilizing soil and filtering water drainage.\(^{66,67}\)

- **Transparency.** Growing food allows gardeners to know exactly where and how their food was grown. Food gardening allows gardeners to closely monitor or eliminate the application of synthetic chemicals such as pesticides, herbicides and chemical fertilizers.

- **Safeguards biodiversity.** Food gardening may include heirloom and heritage varieties of fruits and vegetables further preserving the biodiversity of the food supply.\(^{68}\) Diversifying the foods that are grown reduces vulnerability to plant diseases and pests. Food gardening may encourage seed saving thereby preserving genetic diversity and securing future food supplies.\(^{69}\)

- **Supports national security.** During World War II, 20 million homeowners had Victory Gardens that produced up to 40% of the fresh vegetables consumed in the U.S. Growing food on U.S. soil builds food security and national security while decreasing our dependence on other countries for foods that promote health.\(^{70}\)
Local, state and federal policies and laws can support and increase food gardening practices. Communities should investigate what policies exist, which policies pose barriers and what policies could be implemented to increase access to food gardening by all. Examples of some policies to be considered include:

- **Zoning ordinances.** Municipal and county zoning ordinances regulate land use and community infrastructure such as building height, lot coverage, uses (i.e., residential, commercial, agriculture) and may include landscaping guidelines. Communities may establish zone protections that allow community gardens as approved land uses permitted in residential, multifamily and other areas. This would allow a community garden to operate without needing to obtain permits or other approval processes. Communities could advocate for an interim land use policy in which vacant public or private lots can be used for community gardens or other food production. Cities can offer support for garden programs through public coalitions or oversight of work.\(^\text{71}\)

- **Restrictive covenants.** It is often agricultural land that is taken out of production in exchange for constructing housing developments, retail establishments or business parks. Ironically, many developments impose restrictive covenants that prohibit or limit growing edible plants on newly developed land. Communities should assess the myriad of restrictive covenants specific to residential areas and develop model covenants that allow and support container or backyard gardening.

- **Water access.** Having adequate access to water is often a barrier for community, workplace, school and faith-based gardens. For gardens located on public land, the community may need to negotiate with local officials to assure access to water and/or irrigation. This may be in the form of connecting to the nearest water main, installing a new water line or placing refillable water tanks on the site. Another option would be to harvest rainwater through rain catchment systems.

- **Food & Nutrition Assistance Programs.** Of the numerous federally funded food and nutrition assistance programs available to low-resource individuals, only the Supplemental Nutrition Assistance Program (SNAP) allows participants to use their cash benefits to purchase edible plants or seeds. Community and social service organizations could more widely promote this option to SNAP participants. Farmers’ markets that accept SNAP could market their fresh produce and edible plants to SNAP participants. To expand this option, individuals could advocate state administrators, USDA and congress to allow WIC and Senior Farmers’ Market Nutrition Program benefits to be used to purchase edible plants or seeds.

- **Tax credit.** An incentive for food gardeners to donate vegetables and fruits to a local food pantry would be to offer a tax credit. A percent of the market value of the produce could be tax deductible. This would require state legislative action and a change in Iowa’s tax code.\(^\text{72}\) Another example of a tax credit would be provided to those who donate land for personal food production.
Get Growing!
A Checklist for Advancing Food Gardening & Healthy Food Access for All

Recognizing the health, economic, social and environmental benefits of food gardening in Iowa is the first step in promoting food gardening as a strategy for increasing access to healthy food for all Iowans. This checklist has examples of steps taken by individuals, families, organizations, communities and policymakers to ‘get growing’ and build systems, environments and policies that support food gardening.

Individuals & Families
☐ Learn more about food gardening. Check out resources at the library, garden center or the county extension office.
☐ Determine where the garden will grow. It may be in pots in a windowsill, patio, backyard or community garden. Start small. A manageable garden will be an enjoyable garden.
☐ List your favorite vegetables and fruit and select seeds or plants for the garden.
☐ Gather tools and materials and solicit family and friends to help create the garden.

Schools, Worksites & Organizations
☐ Determine the capacity (land, access to water, resources, administrative support) to begin and maintain a garden.
☐ Form a team and develop a food gardening plan. Identify resources and how the harvest will be distributed.
☐ Integrate food gardening messages or promotions into student or employee communications.
☐ Provide a discount on health insurance for employees who participate in the employee garden.
☐ Incorporate garden grown produce in student and employee salad bars.

Communities
☐ Establish partnerships between congregations and food pantries to grow food for low-resource Iowans.
☐ Include community garden information in visitor guides and welcome packets.
☐ Organize a neighborhood food gardening club to exchange ideas, seeds, plants and produce.
☐ Promote the use of SNAP benefits to purchase vegetable and fruit seeds and plants.
☐ Launch a gardening tool loan program for gardeners to borrow tools and equipment to start and maintain their gardens.
☐ Design signage to market community gardens in your neighborhood.

Policymakers (municipal, county, state, federal)
☐ Revise restrictive covenants for urban and suburban developments to allow food gardens and edible landscaping.
☐ Call the mayor or city council about having regular access to water at community garden sites.
☐ Talk with city planners about vacant city property that could be converted to a city orchard.
☐ Attend a county board of supervisor meeting to discuss how county-owned land could be used for community orchards or gardens.
☐ Meet with state legislators to encourage a tax credit for gardeners who donate fresh produce to food pantries and emergency feeding sites.
☐ Contact members of congress to request the use of the WIC fruit and vegetable cash value voucher or WIC farmers’ market nutrition program vouchers to be used to purchase vegetable plants and seeds.