

2. Healthy Soils, Healthy Communities: Assessing and Addressing Contaminants in Urban Soils

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Abstract:

The need for affordable, healthy foods (including organic and locally produced items) has increased public interest in urban gardens. In addition to food security, economic savings, and reduced environmental impacts associated with food transport and large-scale production, gardens provide urban green space, opportunities for recreation and community building activities, and diverse benefits for public health. However, urban soils can contain a number of contaminants that may pose risks to human health. The growing number of vegetable gardens in urban areas such as New York City could increase environmental exposures to soil contaminants (e.g., lead), yet the extent of contamination in many communities remains uncertain. Existing risk assessments and risk communication efforts do not sufficiently address community concerns or link research findings to education and public health action strategies. Communities in New York City and elsewhere in New York State have identified several key needs related to soil contamination and public health, including requests for collaborative research and better communication, education, and training to address issues of concern. Through a community-research partnership that includes Cornell researchers and Extension educators, government agencies, community organizations, gardeners, and others, our collaborative research will address community concerns and directly inform the development of education and public health action strategies. Key project activities include: (1) Assessing soil and vegetable contaminant levels (and other soil properties) and human exposures through gardening activities in urban community gardens; (2) Evaluating the effectiveness of management strategies in mitigating associated health risks; (3) Translating research findings into effective education and public health action strategies; (4) Identifying future research needs to sufficiently characterize potential exposures and risks for urban gardeners; and (5) Evaluating the success of education and outreach programs in effectively addressing community concerns and reducing exposures to soil contaminants related to urban gardening activities.

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