

**Earth Policy Institute
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FARMING IN THE CITY Lester R. Brown

While attending a conference on the outskirts of Stockholm in the fall of 1974, I walked past a community garden near a high-rise apartment building. It was an idyllic Indian summer afternoon, with many people tending gardens a short walk from their residences. More than 30 years later I can still recall the setting because of the aura of contentment surrounding those working in their gardens. They were absorbed in producing not only vegetables, but in some cases flowers as well. I remember thinking, "This is the mark of a civilized society."

In June 2005, the U.N. Food and Agriculture Organization (FAO) reported that urban and peri-urban farms--those within or immediately adjacent to a city--supply food to some 700 million urban residents worldwide. These are mostly small plots--vacant lots, yards, even rooftops.

Within and near the city of Dar es Salaam, capital of Tanzania, there are some 650 hectares of land producing vegetables. This land supplies not only the city's fresh produce but a livelihood for 4,000 farmers who intensively farm their small plots year-round. On the far side of the continent, an FAO project has urban residents in Dakar, Senegal, producing up to 30 kilograms of tomatoes per square meter each year with continuous cropping in rooftop gardens.

In Hanoi, 80 percent of the fresh vegetables come from farms in and immediately adjacent to the city. These urban farms also produce 50 percent of the pork and the poultry consumed in the city. Half of the city's freshwater fish are produced by enterprising urban fish farmers. Some 40 percent of the egg supply is produced within the city or in its shadow. Urban farmers ingeniously recycle human and livestock waste to nourish plants and to fertilize fish ponds.

People living in wetlands in the region of East Calcutta in India manage wastewater fish ponds that cover nearly 3,500 hectares. Bacteria in the ponds break down the organic waste in the city's sewage. This, in turn, supports the rapid growth of algae that supply food for the various local strains of herbivorous fish. This system provides a steady supply of fish for the city, fish that are consistently of better quality than any entering the Calcutta market.

The magazine Urban Agriculture describes how Shanghai has in effect created a nutrient recycling zone around the city. The municipal government manages 300,000 hectares of farmland to recycle the city's night soil. Half of Shanghai's pork and poultry, 60 percent of its vegetables, and 90 percent of its milk and eggs come from the city and the immediately surrounding region.

In Caracas, Venezuela, a government-sponsored FAO-assisted project has created 4,000 microgardens of one square meter each in the city's barrios, many of them located within a few steps of family kitchens. As soon as one crop is mature, it is harvested and immediately replaced with new seedlings. Each square meter, continuously cropped, can produce 330 heads of lettuce, 18 kilograms of tomatoes, or 16 kilograms of cabbage per year.

Venezuela's goal is to have 100,000 microgardens in the country's urban areas and 1,000 hectares of urban compost-based gardens nationwide. Leonardo Gil Mora, vice minister of integrated rural development, points out that "in the barrios as in Venezuela in general, people are the most important thing we have. Through urban agriculture, we hope to increase the poor's self-confidence, and so increase their participation in society."

There is a long tradition of community gardens in European cities. As a visitor flies into Paris, numerous community gardens can be seen on the outskirts of the city. These small plots produce not only high-quality food but a sense of well-being and community.

As a result of a national campaign in Cuba to expand urban farming after the loss of Soviet support more than a decade ago, Havana now produces half of the vegetables its residents consume. The city-state of Singapore has 10,000 urban farmers who produce four fifths of the poultry and a fourth of all the vegetables eaten there. A 2003 Urban Agriculture study reports that 14 percent of London's 7.6 million residents produce some of their own food. For Vancouver, Canada's largest west coast city, the comparable figure is an impressive 44 percent.

In the U.S. city of Philadelphia, community gardeners were asked why they gardened. Some 20 percent did it for recreational reasons, 19 percent said it improved their mental health, and 17 percent their physical health. Another 14 percent did it because they wanted the higher-quality fresh produce that a garden could provide, 10 percent did it for spiritual reasons, and 7 percent said it was mostly economic--cost and convenience. Urban gardens are social gathering places that engender a sense of community. In

addition, those who garden three to four times a week get the same physical benefits as people who engage in moderate walking or bicycling.

In some countries, such as the United States, there is a huge unrealized potential for urban gardening. A survey indicated that Chicago has 70,000 vacant lots, and Philadelphia, 31,000. Nationwide, vacant lots in cities would total in the hundreds of thousands. The Urban Agriculture report summarizes why urban agriculture is so desirable. It has “a regenerative effect...when vacant lots are transformed from eyesores--weedy, trash-ridden dangerous gathering places--into bountiful, beautiful, and safe gardens that feed people’s bodies and souls.”

Given the near inevitable rise in future oil prices, the economic benefits of expanding urban agriculture, even in affluent societies, will become much more obvious. Aside from supplying more fresh produce, it will help millions discover the social benefits and the psychological well-being that urban gardening can bring.

Adapted from Chapter 11, “Designing Sustainable Cities,” in Lester R. Brown, *Plan B 2.0: Rescuing a Planet Under Stress and a Civilization in Trouble* (New York: W.W. Norton & Company, 2006), available on-line at www.earthpolicy.org/Books/PB2/index.htm

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