



Growing Food Under Siege

Problem Statement

Areas experiencing active conflict have disrupted food supply chains and diminished food resources, which can quickly lead to critical food insecurity. How quickly could people living in these areas grow their own food to supplement, and eventually replace, humanitarian food aid? What is the fastest growing food for direct consumption? And can this food be produced in areas under siege, where all resources are limited?

Solution

Dr. Andrew Adam-Bradford, a Feeding Cities Group partner, is developing and testing practices to help cities in active conflict zones quickly expand local food production. He argues that humanitarian relief efforts should provide individual food production technical assistance in conjunction with emergency food distribution. This will help people transition faster from food aid dependency to food self-sufficiency.

He outlines several practical considerations for growing food under siege conditions, including the following:

1. Identify suitable plants for the area that are quick-growing, require minimal land, and are nutrient-dense. Distribute seed packages for these plants along with emergency food.
2. Organize support and training to educate individuals about growing techniques, including the incorporation of different growing materials beyond soil (e.g., compost and rubble).
3. Promote growing food in containers and small plots of public land (e.g., street medians). “Low space” or “no space” agriculture is a concept created for urban agriculture contexts where arable land is limited.
4. Maximize safe utilization of organic waste for compost and human wastewater, or “grey water,” for irrigation.

These strategies promote both soil and water conservation, which is critical for conflict zones where resources are scarce and people often congregate in camps.

Dr. Adam-Bradford’s recommendations for growing food under siege are based on successful urban agriculture interventions in camps, cities, and settlements for internally displaced persons and refugees. Refugees are encouraged to grow food in small gardens or sacks to supplement food rations. The Minimum Standards guidance for

refugee camps issued by the United Nations Refugee Agency (UNHCR) includes space for limited kitchen gardens, which he calls “micro-gardens” (The Sphere Project, 2011).

Dr. Adam-Bradford also draws from his study of Syria, where people used container gardens, home gardens, and rooftop gardens to supplement food aid during recent brutal sieges. He also documented the case of Banda Aceh in Indonesia, where survivors of the 2004 tsunami planted productive gardens around temporary shelters. Some of the gardens had over 30 different crops on plots measuring 3x5 meters—the size of a standard garden shed.

Putting these strategies into practice will require innovative approaches and innovative organizations. As José Andrés, the founder of World Central Kitchen states, “When you talk about food and water, people don’t want a solution one week from now, one month from now. The solution has to be now.”

Learn More

- Adam-Bradford, A.; Osman, M. 2009. [*Tsunami aftermath: Development of an indigenous home garden in Banda Aceh*](#). Urban Agriculture Magazine 21: 29–30.
- De Zeeuw, H., & Drechsel, P. (Eds.). 2015. [*Cities and Agriculture: Developing Resilient Urban Food Systems*](#). Routledge.
- The Sphere Project. 2011. [*Humanitarian Charter and Minimum Standards in Humanitarian Response*](#). Rugby: Practical Action Publishing.

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