Urban Agriculture in Japan
5 Typologies and their relative benefits
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**Goal:** To integrate agriculture with the urban form as a community amenity first, and a location of production second.

**Benefits of urban agriculture:**
- A productivity model that pays off outputs with physical and ecological benefits
- Reduced transportation costs and emissions
- Reduced end price
- Increased in-season food availability
- Connection with the seasons and the systems that sustain us
- Educational opportunities

**By The Numbers**

Agriculture is hard to pin down, particularly as we’re looking mostly community farming. Jane grows potatoes better than Bob, Joe grows only organic, Javier has a lot of other work to do, and Bobby Ray grows flowers. What are you going to do? I have decided that the point is that people have the OPPORTUNITY to dig in the dirt and supplement their diets that way, not to figure out precise yields. The grocery store is going to disappear, and people shouldn’t necessarily grow all their own food in their back yard this close to Tokyo. Urban farms are another matter, and again, everything depends on method and the particular farmer. That said, there are some useful guidelines available, which occasionally differ from one another:

* Japanese people eat 158 kg of fruit and veg per year, on average.
* A typical British allotment is 250 meters square — that’s a pretty big yard, and that’s how big the single family houses yards and allotments are in the typologies above. It’s big enough to grow a lot of stuff, but it won’t take up all your time.
* 1 person can farm 500 meters square alone, but that’s full-time, and produces food for market.
* In Cuba, they can grow 8-20 kilograms of food per meter squared per year, using organic intensive farming methods.
* All lots should be accessible to potential community farmers in case of owner disinterest.
* Bio-Intensive methods can provide a full diet to 20 people per hectare (That’s 900 hectares for 18,000 people).
* Producing only fruit and veg for 18,000 people requires only 36 hectares (people eat a lot of meat, meat eats a lot of veg).

**Productive Yards**

* The National Gardening Association estimated that a $70 investment would yield $500 in produce. U.S. Department of Agriculture yield estimates are even higher: Each $100 spent produces $1,000 to $1,700 worth of food.

**Community Gardens**

The National Gardening Association says a well-maintained food garden yields about 1/2 pound of produce per square foot of garden area over the course of the growing season, worth about $2 per pound. That means the average-size garden — 650 square feet (56 square meters) — can produce 300 pounds of produce worth $600. Minus the $70 most people spend on their garden each year, consumers can typically net $530 in food savings. Multiplied by the number of food gardeners in the country (56 million households), NGA estimates that American food gardeners are producing more than 21.6 billion dollars of produce a year.

* Health benefits: Better diet with fresh food, open space for exercise. Gardening as exercise, and stress reduction from connection to nature
* Increased habitat for wild species
* Reduction of urban heat island
* Increased community connection and investment

**Allotments**

* Bio-Intensive farming requires “double-digging” planting beds to a depth of 24 inches. That means turning all that soil over. Not of the faint of limb.
* Do-Nothing Farming, also known as Natural Farming, the Fukuoka Method, is an alternative farming method to chemical or traditional farming. Developed for 20 years by Masanobu Fukuoka of Japan, this method includes the use of crop rotation, minimal irrigation, no or reduced tillage, “seed balls,” and allowing natural regulation of pests.
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**Urban Farm/CSA**

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1. Japan imports 65% of its food.
2. Japanese food expenditures: 18% of income.
3. Rice represents 55% of Japanese produce, but 18% of food profits.
4. Japan is 90% self-sufficient in rice.

* Carbon footprint of food consumed per year (Netherlands — expect higher for Japan because of greater food imports) = 2800 kg
* Carbon footprint of heating, cooking, cooking, hot water in new 4 person house per year (UK) = 2600 kg

In 2018, the number of people growing vegetables increased 10 percent over previous years. The National Gardening Association (NGA) anticipates that number will increase by 20 percent in 2009.