



# Recipes for Growing Together


### Why Urban Agriculture?



Lack of food planning



Soil Contamination

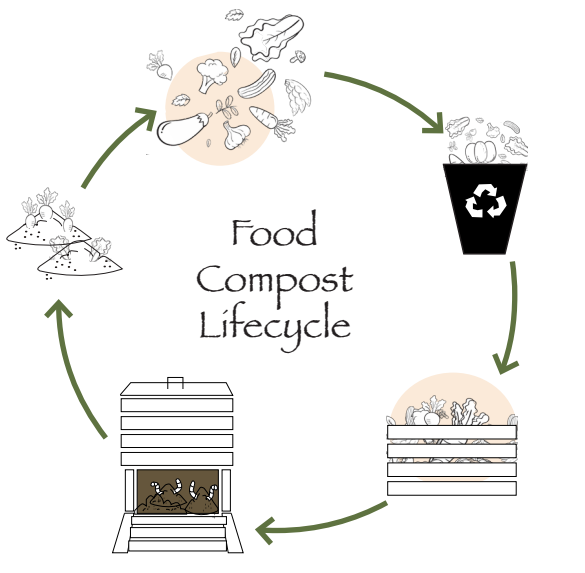


Densification


Urban cultivation takes various forms, from growing basil in a window to larger-scale farms in urban areas. The central idea is that food is grown close to where it is consumed, either within the city or in nearby peri-urban areas. It is also essential that the food is produced using organic methods.

In this project we explore how to develop a better food system for Järfälla Municipality. We initiate 3 interventions that could increase access to fresh, healthy food, promote social cohesion, education around circular and sustainable gardening practices, and create more robust socio-ecological networks.

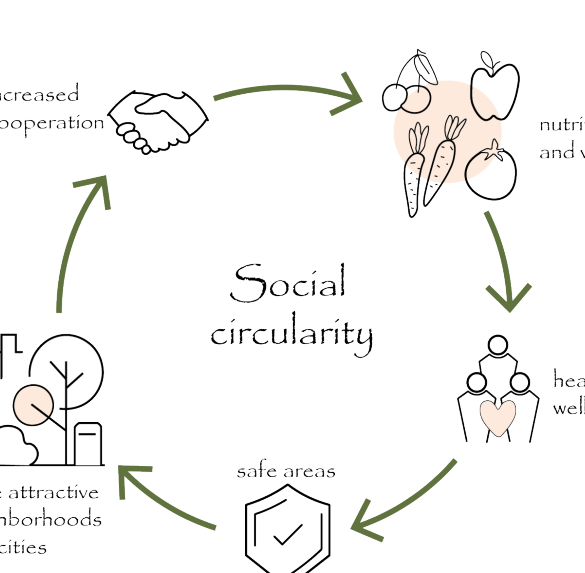
### Circular Urban Agriculture



Food Compost Lifecycle



Park/Forest management



Social circularity

Composting has several benefits for gardening and agriculture by enriching the soil and promoting sustainability through the circularity of biomass nutrients. It improves soil structure, enhances fertility, and retains water, all of which improve the environment for cultivating fruits and vegetables. Compost can be created from many sources of biomass from animal waste, and kitchen waste, and can also integrate the use of autumn leaves that are available in abundance.

In the context of larger agricultural lands and forests, the practice of composting and mulch production can be integrated by the municipalities and farmers' facilitation. The municipality organizes the collection of leaves and wood products to then be reused in the form of mulch and compost to improve soil fertility, water retention and improve soil structure.

An important part of circular urban agriculture that's often overlooked is social circularity—how it strengthens connections between people and communities. In our project, we aim to not only focus on sustainable practices for the physical environment but also create a circular exchange of knowledge, collaboration, and support among residents. This approach helps build stronger local ties, makes neighborhoods greener and more attractive, improves safety, and even boosts property values. By working together, we can create vibrant, sustainable spaces that benefit everyone.

### Recipe 1: Community Garden

Community gardens are a form of urban gardening where the focus is on collective and shared space to produce food, unlike in allotment gardens where each family or individual has a specified plot.



**Chef**

Municipality  
Schools  
Housing cooperatives,  
Local residents.



**Guests**

Students  
Residents.



**Location**

Jakobsberg  
Barkarbystaden  
Kalhäll

**Selected Types**

**Cooperative:** For Local Residents  
**Youth-Garden:** For Schools

**Ingredients:**

- Available land
- Accessible water resource
- Untamated soil
- Public willingness
- Gardening tools
- Tool Storage
- Raised garden beds
- Seeds
- Compost bins
- Community workshops
- Facilitator
- Community board



### Recipe 2: Rooftop Garden

A form of rooftop farming, and a solutions in urban areas with limited space and limited urban space for in-ground agriculture.



**Chef**

Architects,  
Landscape architects,  
horticulturists,  
gardeners,  
structural engineers,  
property managers,  
construction workers.



**Guests**

Pollinators  
Residents  
Schools  
Local business employees



**Location**

Barkarbystaden

**Selected Types**

**Extensive Green Roofs:** Lightweight, low-maintenance, drought-tolerant plants.  
**Garden Roofs:** Herbs, vegetables/small trees.  
**Nature Roofs:** Support biodiversity.

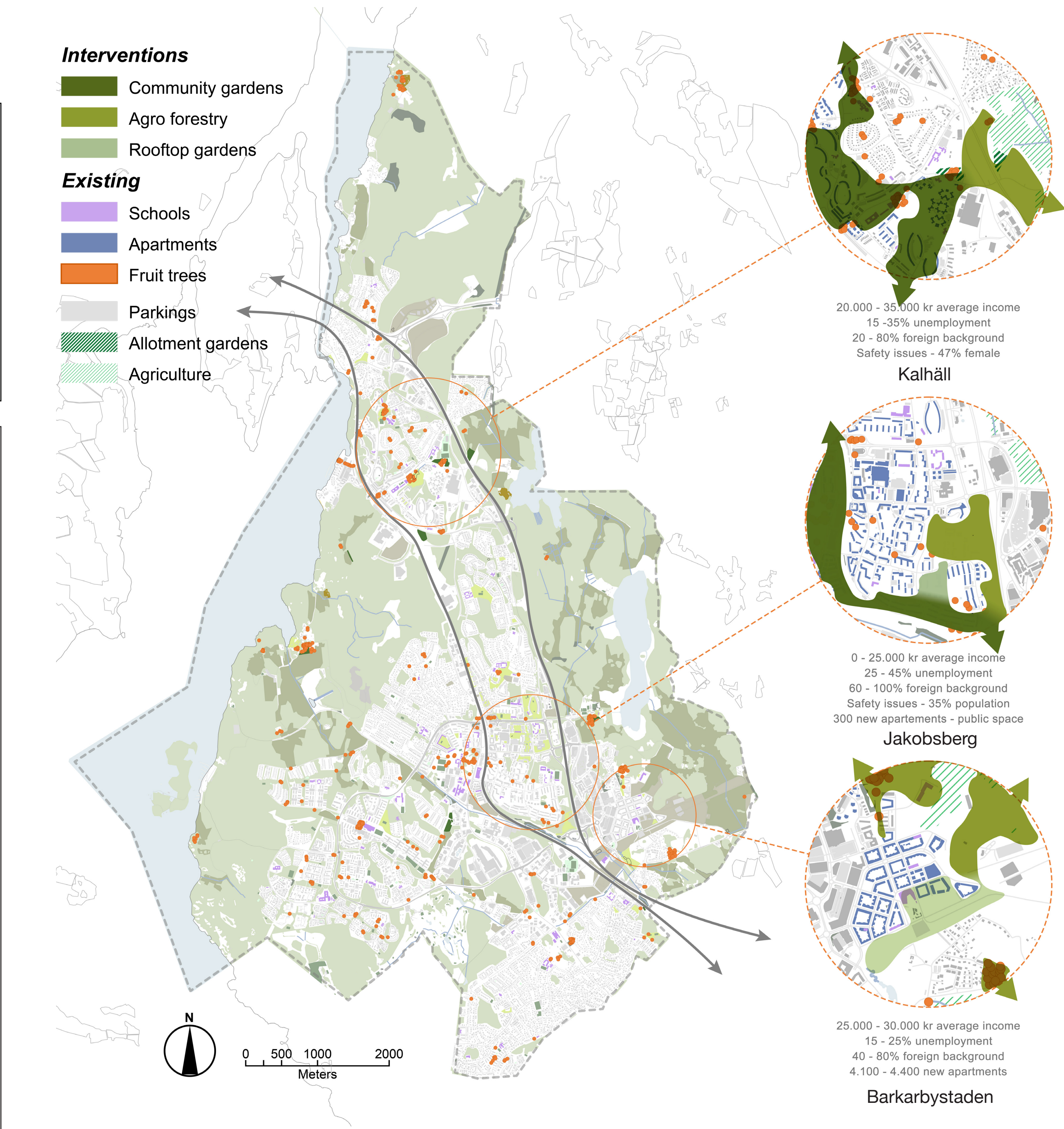
**Ingredients:**

Vacant flat rooftops  
Slanted roofs (sedum)  
Rain water collector  
Public willingness  
Gardening tools  
Tool Storage  
Seeds

Raised garden beds  
Green house  
Compost bins

Optional ingredients:  
Facilitator





### Recipe 3: Agroforestry

**Benefits**

**Below Ground:**

- Increases micro-life improves soil structure.
- Topsoil is nutrient-rich and enhances fertility.
- Micro-life and plant roots increase climate resilience and nutrient efficiency.
- Carbon is better stored in the root system, trunk, branches, and soil.
- Nitrogen needs are reduced with nitrogen fixers like Lupine and Red Clover.
- Proper species selection improves water management and prevents soil erosion.
- Perennials and living soil enhance water quality by capturing pollutants.
- Soil diversity supports beneficial organisms (bacteria, fungi, etc.).

**Above Ground:**

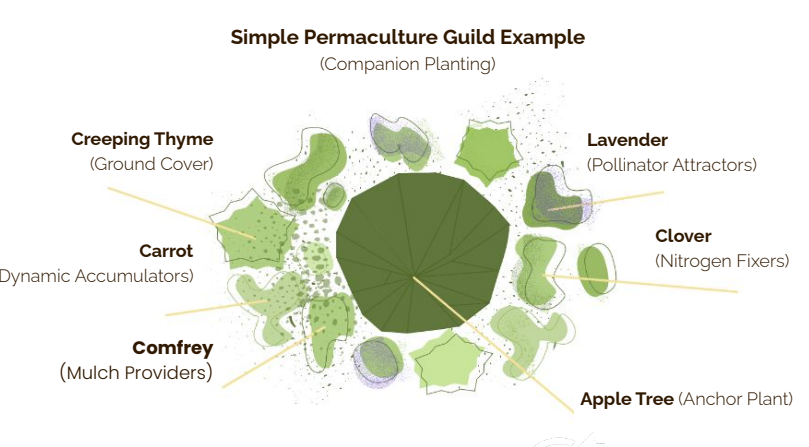
- Higher photosynthesis and biomass production.
- Improved microclimate with wind protection and frost tolerance.
- Perennials tolerate drought better than annuals.
- Reduces disease and pest attacks.
- Increases biodiversity.
- Acts as biotopes or corridors for wildlife.
- Intercropping increases productivity and resource capture (Land Equivalent Ratio).
- Diversifies products (timber, bioenergy, medicinal plants) for increased self-sufficiency.
- Provides food and income security (variation).
- Extended harvest seasons from early spring to late fall.
- Requires less spraying and fertilization, even in conventional farming.


**Challenges**

- Incorrect crop choice can deplete soil and create nutrient competition.
- Some plants release harmful chemicals affecting others.
- High Labour & Costs
- Unsupportive Policies
- Lack of Value Chains
- Conflicts between forestry and agriculture sectors hinder progress.
- Limited Training
- Limited resource Access
- Unclear land ownership discourages long-term investment.

### Permaculture Guilds


**Simple Permaculture Guild Example**  
(Companion Planting)






**Chef**

Residents,  
Community organizations,  
Municipal urban planners,  
NGOs and local environmental groups,  
Housings.



**Guests**

Pollinators  
Environment  
Residents  
Schools



**Location**

Barkarbystaden  
Jakobsberg  
Kalhäll

**Ingredients:**

Green areas  
Existing anchor plants (Fruit tree)  
Companion plants:  
Nitrogen fixers (Gray Alder, Lupine, Red Clover, Timothy Grasses).

Dynamic accumulators (Potatoes, Carrots)  
Pest Repellents (Aromatic Garlic, Marigolds)  
Native Pollinator attracting flowers  
Ground Covers (Lingon berries, Wild strawberries, Creeping thyme)  
Mulch providers (comfrey, nasturtiums).

### HOW TO DO:

**Step 1: Site Selection**  
Identify suitable existing fruit trees (anchor plants) in Järfälla, so that permaculture guilds can be built around these.

**Step 2: Pilot Projects**  
Establish using companion plants (See Diagram).

**Step 3: Community Involvement**  
a. Residential workshops and education about managing guild systems.  
b. Provide information on the trees and the companion plants to increase communal trust in picking them.

**Step 4: Maintenance**  
Step 3b Helps for maintenance.  
Conditional: Use of mulch collected from forest and parks.

**Step 5: Monitoring and Scaling**  
Evaluate scalability to public and private housing areas.

**Common Steps:**

**Step 1: Community Engagement & Education**

- Organise events to demonstrate the practices to residents and local farmers. Partner with schools and universities to incorporate permaculture and agroforestry into curriculums and research projects.
- Introduce reward systems (e.g., tax benefits or grants).

### Intercropping





**Chef**

Local farmers,  
Universities and Research Institutes,  
agricultural cooperatives eg. Stiftelsen Lantbruksforskning, Governmental organizations eg. IFAD, NGOs, Interorganizational organizations eg. European Union.



**Guests**

Pollinators  
Environment  
Local farmers (large and small scale),  
Residents



**Location**

Barkarbystaden  
Jakobsberg  
Kalhäll

**Ingredients:**

Trees  
Active arable agricultural lands  
Variety of ecologically balancing plants eg. Sweet clover, rye, alfalfa and Winter wheat.

**HOW TO DO:**

**1. Row Intercropping**

- Promote planting complementary crops in rows to optimise resource use and productivity in peri-urban agricultural lands.
- Assess the economic and ecological benefits of row intercropping for local farmers & further incentivise them.

**2. Strip Intercropping**

- Implement strip intercropping on sloped lands to prevent soil erosion & improve land productivity.
- Maintain ecological balance; combine soil-conserving (e.g., Sweet clover, rye, alfalfa, and winter wheat) and soil-depleting crops in strategic patterns.

**3. Relay Intercropping**

- Promote relay intercropping in areas where time and soil moisture are constraints. This will allow two crops to coexist briefly & optimise land use.
- Guide seed rates and crop combinations to improve yields & adaptability.

**Step 2: Infrastructure & Policy Support**

- Establish community resource hubs that offer tools, seeds & educational materials for implementation.
- Develop policies e.g zoning regulations and financial incentives.
- Monitoring and Feedback.

**Step 3: Long-term Integration**

- Incorporate permaculture and agroforestry into urban design frameworks, creating green corridors, edible landscapes, and sustainable drainage systems.
- Climate Adaptation Strategies
- Scalability