Allotment garden: a new approach to urban agriculture

An allotment garden is a concentrated area of several small parcels of open land used exclusively to grow vegetables, fruits, and cut flowers. It includes a shed for tools and other garden implements. Called "garden of the poor," it originated in Europe about 150 years ago when at the height of industrialization, cities, municipalities, and monasteries provided plots for the urban poor to grow food for their families.

Adaptability

Over half the world's population live in cities where their size and number are rapidly increasing. In the Philippines, urban areas grow at almost double the national average of 2.3% per year. These urban areas are vulnerable to natural, man-made, and technological risks that threaten the livelihood, health, and lives of the people. Thus, allotment gardens are considered a fitting solution to some of these urban problems. Aside from providing food and income, these gardens also contribute to waste management.

A pilot area for allotment garden was established in Cagayan de Oro City, Philippines. The pilot area was selected based on the community's practice and experience on waste segregation. The allotment garden was linked with the biodegradable fraction of the segregated waste, which was used as compost in the garden. Additional allotment gardens were replicated in three other locations in the city (Figs. 1 and 2).

Effectiveness

The allotment garden was accepted in the community, and was found essential for the area's solid waste management program. Residual waste was reduced to 33%, since 55% of the biodegradable waste went to the compost heap in the allotment garden, while the recyclables (12%) were sold to a garbage picker's association. This significantly reduced the waste dumped into the city landfill. Landowners who participated in the program offered other areas for use as allotment garden.

Fig. 1. Tomato and cauliflower allotment garden in Gusa, Cagayan de Oro, Philippines
How it is done

To establish an allotment garden, follow these steps:

- Recruit beneficiaries - The beneficiaries must be willing to do garden work, reside near the project site, and have low family income.
- Advocate and promote the project to local officials and information officers.
- Train allotment gardeners.
- Form an allotment gardeners' association.
- Establish the allotment garden.

The size of each allotment unit is 3,200 m² consisting of eight beds measuring 20 m x 20 m = 400 m².

Plant each bed with different botanical families (cucurbits, solanaceous crops, legumes, leafy vegetables, etc.) to make a mix of plants with positive influence on one another.

Implement sustainable crop management practices, which are environmentally sound, socially acceptable, and economically viable.

Choose the right cultivars. Use varieties tolerant or resistant to pests and diseases.

Use integrated pest management (IPM) technology. Some of the IPM techniques use biopesticides (e.g. *Bacillus thuringiensis* and *Metarhizium*) alone or in combination with chemical pesticides; beneficial insects such as *Trichogramma chilonis* for biological pest control (fruitworm in tomato and earworm in corn); and concocted neem leaves and detergent soap.

During the dry season, use bucket drip irrigation. Attach two buckets with a volume of 200 L connected to 20 drip irrigation laterals of 20 m length covering the 400 m² area.

One important aspect of the allotment garden is the compost heap for biodegradable household wastes. This links the allotment garden with the integrated solid waste management program in the pilot area.

Fig. 2. Allotment garden in Lapasan, Cagayan de Oro, Philippines