Urban Agriculture Program in the Philippines: Its Beginning and Status

PEDRITO S. NITURAL
Urban Agriculture Program In The Philippines:
Its Beginning And Status

Pedrito S. Nitural

ABSTRACT

The paper presents an overview of the initial efforts undertaken in Urban Agriculture Program of the Philippines for the last few years and the present situation of the program to date. It discusses key important insights gained from the collaborative work done by different government agencies particularly the Department of Agriculture, the Bureau of Agricultural Research, local government units (LGUs) and selected government academic institutions throughout the country.

Moreover, a conceptual framework of the National Integrated Research and Extension Program for Urban Agriculture in the Philippines was also presented for possible collaboration with other government and private agencies or research institutions in the country and probably overseas.

INTRODUCTION

Poverty and food security are the most pressing problems that government has to address with urgency. Cognizant of these problems, the present administration has set its focus on food security and poverty alleviation as a basic goal and a priority agendum.

In the Philippines, agriculture is concentrated in rural areas. Urban places are just favorite market outlets of the products of rural agriculture. At times, artificial shortages of rural agriculture products are felt in urban centers owing to market strategies or for other reasons to include preference of traders to market the products when they could obtain more handsome profit.

Urban agriculture seems to be the logical approach to easing problem of food scarcity in centers of population. It means the production of food or agricultural products is done within the confines of the cities, which may also include population centers in bustling towns. Families or organized groups do in and around homes, open community or public spaces even in rooftops the production in available spaces.
Lastly, establishing an urban agriculture project or container farming could provide nutritional and economic benefits to urban residents as well as to the quality of life for millions of urban residents and foster a sense of achievement and hope.

**REVIEW OF PAST AND CURRENT PHILIPPINE URBAN AGRICULTURE EFFORTS**

The term urban agriculture has surfaced in cursory discussions among the members of the administrative council of the Cavite State University (CvSU), then Don Severino Agriculture College (DSAC), as early as 1990. CvSU research and development activities focused on multi-storey farming systems with coconut and coffee base crops. With limited land area available for large scale farming, the college opted to develop nursery management for ornamentals, rapid propagation of orchids, greenhouse management of high value crops and vegetables, and the development of native chicken. It may be noted that these are some components of urban agriculture.

It has also been observed that muscovy duck can thrive on droppings of poultry with very little feed supplement. The recycling of chicken manure for fish feed is not new. This practice has been observed in some small poultry farms in Laguna during the early 1980s where the structures are built above tilapia or catfish ponds. However, the psychological impact to consumers has contributed to the demise of the practice.

In the 1990s, a systematic approach to urban agriculture was introduced in Quezon City with its Urban Agriculture Program conceptualized by the Bureau of Agricultural Research. The program aimed to develop technologies on the raising and use of crops, livestock and fish in the urban setting. Such technologies included conversion of biodegradable solid wastes into humus or compost, recycling of waste water, integrated pest management, and use of organic or herbal pesticides, among others (Morcozo, Technotrends 4, 1995).

The College of Agriculture of the University of the Philippines (UPLB) created a committee on Urban Agriculture Research and Development in 1995 to apply the principles of agriculture in producing food in the urban environment while enhancing its surroundings (UPLB-CA Workshop Proceedings on Urban Agriculture, 1995). A 1995 planning workshop laid down the foundation for the development of a research and development framework for urban agriculture. The research and development framework stressed on sustainable production, productivity enhancement, product quality evaluation in contaminated urban environment, post harvest handling of commodities grown in urban areas, urban waste management and utilization, horticulture, policies affecting the practice of urban agriculture, greening, and marketing studies.

As reported by Duldulao (2001), urban agriculture has been practices even before we had term for it. In fact it was observed being practiced in the cities of Las Piñas, Parañaque, Pasay, Quezon City and in the cities in other parts of the country. Simply, urban agriculture is farming in the cities and other highly urbanized areas. It became a national program in 1998 when Acting Agriculture Secretary William Dar
instructed then Region IV Director Conrado Gonzales to include urban agriculture as one of the programs of the Department of Agriculture in Region IV. This was formally the birth of the Urban Agriculture Program in the Philippines.

In response, Barangay Holy Spirit in Quezon City was identified as the pilot area representing a city in Metro Manila and Barangay Sto. Toribio, which is along the railroad tracks in Lipa City representing an urban area in the province. A UAP task force was formed at DA Region IV to implement the projects. These two projects succeeded in demonstrating the feasibility of urban agriculture.

Then, in 1999 a model of urban agriculture dubbed as Receptacle Farming was established in Central Luzon State University in the Science City of Muñoz, Nueva Ecija. From this model, similar models were conceptualized and replicated in selected areas of Metro Manila such as Quezon City, Makati City, Muntinlupa City, Las Piñas City, Navotas and Malabon, to name a few. Likewise, it was also replicated in selected cities and municipalities of the province of Nueva Ecija through the funds granted by Food and Agriculture Organization (FAO) amounting to two thousand US dollars (US$ 2,000).

**BENEFITS OF URBAN AGRICULTURE**

In a grand scale, urban agriculture can help ease up the problem of food scarcity in centers of population. It can help alleviate the problem and enhance the beauty of communities and homes. Above all, it can start for the future a successful massive “city farming” whose participants have a change behavior and thinking pattern about production of food, recycling of wastes, protection of the environment, nutrition, working together, and dignity of labor.

For personal benefits of the participants, all the following maybe accrued to them:

- Sense of fulfillment for producing the food that they eat
- Transformed sensitivity at their environment as it will now mean a source of what they eat to nourish their body
- Desire to grow more and raise more food as they seem tastier and more nutritious aside from the fact that they are safe from toxic chemicals
- Changed regard to discarded materials, refuse, rains, sunlight, air, soil, and degradable wastes to something that can be used beneficially for production of the food that can be readily brought to the dining table without much expense
- Sense of being well as their undefined restlessness will find assuring calm in tending gardens that produce food they need.

Urban agriculture will certainly bring benefits to the urban dwellers, to urban centers, to the environment, and to the country in general.
BUSINESS OPPORTUNITIES IN URBAN AGRICULTURE

Without stretching the mind too far, urban agriculture can mean big business opportunities to more enterprising ones.

The growing media for the plants can be prepared and sold to those who need them in case the city dwellers want to have them readily available. This can be composed of soil mixed with compost, soil and rice hull or sawdust, or garden soil from the riverbanks.

Empty cans, discarded plastic containers, earthen pots, unserviceable cooking pots, vats, water basin and many more can be used as growing containers, can be sold to those who need them.
And of course, the produce in urban agriculture can be sold to the public.

PRESENT STATUS OF URBAN AGRICULTURE IN THE PHILIPPINES

In spite of so many collaborative efforts being done by different agencies like the Department of Agriculture, government academic institutions like the University of the Philippines in Laguna, Cavite State University in Indang, Cavite, Xavier University in Cagayan de Oro City and of course the Central Luzon State University in the Science City of Muñoz, Nueva Ecija; I firmly believe that the state of urban agriculture in the Philippines is still underdeveloped. Hence, there is still a big room for research, extension and training activities to be done for the enhancement and proper implementation of urban agriculture in the Philippines.

DOING SOMETHING FOR URBAN AGRICULTURE

Urban agriculture is a feasible, adaptable, adjustable and expandable project. Big cities of the world have it. I see no reason why we cannot have launch it and make it develop until it becomes a sustainable project.

• There is a necessity to create awareness about urban agriculture.
• There is a necessity to adopt urban agriculture, support and sustain it, and make it succeed.
• There is also a necessity for everybody to collaborate to make urban agriculture work.

In 2001, the National Integrated Research and Extension Program for Urban Agriculture was formed under the Department of Agriculture-Bureau of Agricultural Research (DA-BAR). Through the Special Order No. 111, Series of 2001 issued by then DA-BAR Director, Dr. Eliseo R. Ponce on May 24, 2001; a Technical Working Group (TWG) for the Urban Agriculture National Research, Development and Extension (RDE) was created.

Dr. Simeon S. Crucido, Vice President for Research and Extension of the Cavite State University in Indang, Cavite was designated as the national technical
team leader; while, Dr. Constancio C. de Guzman of the University of the Philippines in Los Baños, Laguna. Dr. Pedrito S. Nitural of Central Luzon State University (CLSU) in Science City of Muñoz, Nueva Ecija, Mrs. Amelita B. Tecson of the Bureau of Plant Industry (DA-BPI), and Dr. Antonio G. Papa of CvSU serve as members. Miss Connie Fernando of DA-BAR was appointed as member of the Secretariat.

The Conceptual Framework of the National Research, Development and Extension (RDE) Network for Urban Agriculture Program in the Philippines is shown in Figure 1, below

THE COMPONENTS OF THE PROGRAM ARE THE FOLLOWING:

1. Agricultural Research and Development
   1.1. Benchmark Socio-Economic Studies
        Benchmark socio-economic studies will be conducted to set the baseline before the program.
   1.2. Biotechnology and Varietal Improvement
        Existing varieties of crops and breeds of animals will be screened and new ones developed that can successfully adapt to the urban environment.
   1.3. Cultural Management
        This will involve the development of appropriate crop production techniques including vertical agriculture, hydroponics, bio-intensive gardening and greenhouse farming suited for urban setting. It will also deal with animal management practices for those types of animals that are highly productive but require little space for housing.
   1.4. Pest Management
        This will focus on developing management strategies against common pests and diseases affecting crops and livestock. It will also include strategies by which the occurrence of pathogens can be avoided in an urban setting.
   1.5. Postharvest/Processing
        This will include studies on processing/packaging of plant and animal products to prolong their shelf life and add value to the products.
   1.6. Waste Management
        This will focus on composting and treatment of agricultural and household wastes, recycling of water for irrigation purposes, and wastewater treatment.
   1.7. Agricultural Engineering
        This will involve the design of space-saving planting platforms, efficient rainfall-supplied drip irrigation/fertigation systems and other cost-and-space efficient urban farming machinery and structure.
Figure 1. National Integrated Research and Extension Program for Urban Agriculture Conceptual Framework

**OBJECTIVES**
- To provide food security in the urban areas in the country.
- To increase agricultural production in urban areas.
- Utilize idle lands suitable for urban agriculture.
- Promote urban agriculture in the country.

**PROGRAM COMPONENTS/INTERVENTION**
- Agricultural Research & Development
- Training and Extension
- Market Development
- Land Use Planning and Management
- Policy Advocacy

**ACTIVITIES**
- Benchmark Socio-Economic Studies
- Biotechnology & Varietal Improvement
- Cultural Management
- Institutional & Human Resource Development
- Piloting of Technologies
- Establishment of Demo Farms
- Market Studies
- Marketing Assistance
- Identification of Areas for Urban Agriculture
- Identification of General Agricultural Land Uses
- Policy Studies

**EXPECTED OUTCOMES**
- Productivity of urban Communities increased
- Urban agricultural technologies developed, tested, and adopted
- Institutional and human capabilities for urban agriculture developed
- Market and market networks enhanced
- Idle urban lands suitable for agriculture made productive
- Policies for urban agriculture promoted
1.8. Urban Forestry
Trees/plants that can indicate as well as absorb pollution and species that can be used as food, fuel, and medicine will be identified and tested.

2. Organization, Training and Extension
2.1. Institutional and Human Resource and Development
Manpower development efforts will be pursued to strengthen the capabilities of both program implementers (e.g., researchers, extension workers, and trainers) and beneficiaries (e.g., cooperative members and farmer-leaders). This will also involve the improvement of existing facilities as well as acquisition of new facilities in the host institutions in order to support the implementation of the program. This will include among others the strengthening of service laboratories.

2.2. Piloting of Technologies
The urban agriculture technologies generated through research will be piloted in the program areas.

2.3. Establishment of Demo Farms
Demonstration farms will be established in strategic locations, particularly in urban areas to serve as showcase of urban agriculture technologies. The Cavite State University’s existing Training and Demonstration Farm will be expanded to demonstrate urban agriculture technologies.

3. Planning and Land Use Management
3.1. Identification of Areas for Urban Agriculture
This relevant regional, provincial and municipal/city development plans of the program areas as well as urban land use maps will be reviewed to identify the specific areas for urban agriculture.

3.2. Identification of General Agricultural Land Uses
Land capability and land suitability maps will be obtained and assessed to identify suitable agricultural crops or crop types based on physical characteristics.

4. Market Development
4.1. Market Studies
Market studies including supply and demand projections will be undertaken to establish the level of supply coming into the urban areas, the consumption of urban consumers, and the potential impact of the program on the urban supply-demand situation. The study will also determine the acceptability of consumers to the use of urban agriculture technologies in food production.

4.2. Marketing Assistance
Marketing assistance will be provided to cooperatives to ensure the efficient marketing of produce.

5. Policy Advocacy
Policy studies will be conducted to study the potentials of urban agriculture as well as the issues and concerns affecting urban agriculture. These studies will then serve as the bases for subsequent policy advocacy efforts at the national and local levels that will likewise be undertaken during the duration of the program.

6. Monitoring and Evaluation
A Monitoring and Evaluation (M&E) system will be set up to monitor program implementation, identify problems and enable the program implementers to institute corrective measures when warranted. The M&E will also evaluate program impacts.

7. Program Review
A program review will be done by DA every year to provide an external monitoring and evaluation of the program. This will ensure that the program activities are being implemented properly. It will also allow adjustments in program design, activities and timetable whenever necessary.

REFERENCES


