

URBAN AGRICULTURE IN INDIA AND ITS CHALLENGES

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ABSTRACT

Urbanization is one of the key drivers of change in the world today as the world's urban population will almost double from the current 3.5 billion to more than 6 billion by 2050. It is a challenge not only for urban areas but also for rural areas. Supporting the most vulnerable group in an urbanizing world, demands discussions on food, agriculture and cities in the context of rural-urban linkage.

Now a day we see that globally concept of urban agriculture is quite popular. And we Indians are quite famous for copying the most prevalent styles of developed nation in India without proper assessment. Urban agriculture is no doubt a concept that has made significant impact in few cities of world like Boston, US and Bangkok, Thailand.

Urban agriculture is the practice of cultivating, processing, and distributing food in or around a village, town, or city. It can also involve animal husbandry, aquaculture, agro forestry, and horticulture. These activities also occur in peri-urban areas as well.

In India we have practiced implementing urban farming projects cities of Delhi, Hyderabad and Mumbai. My paper aims at making a study on these projects and outcomes of their implementation.

Keywords: urban agriculture, urban poor, resilience, livelihood.

1. INTRODUCTION

According to Census of 2011, India's population rose to 1.21 billion people over the last 10 years — an increase by 181 million. Urbanization is taking place at a faster rate in India. Population residing in urban areas in India, according to 1901 census, was 11.4%. This count increased to 28.53% according to 2001 census, and crossing 30% as per 2011 census, standing at 31.16%. According to a survey by UN State of the World Population report in 2007, by 2030, 40.76% of country's population is expected to reside in urban areas.

Resources are always limited. And in a developing and highly populous country like India, resources are even scarcer. Population explosion results in the shortage of even the most basic resources like food. According to an article by World Bank Group, "...more than half of all children under the age of four are malnourished, 30 percent of newborns are significantly underweight, and 60 percent of women are anemic." Resources are limited everywhere. Thus, unless we can develop a technology that would enable us to live on just one grain of wheat, the population increase remains a serious problem in India. India spends approximately \$10 billion each year on malnutrition (World Bank Group), and even then the government of India cannot provide the everyday nutritional requirements to everybody in India. If you walk on the street of Calcutta or Delhi, you would notice several children fighting with each other for a small piece of bread that they found in a dumpster. While this might be shocking to most people, this is a daily routine and the only way to survive for many people in India. Survival of the fittest finds its true meaning on the streets of the urban cities of India.

The recent world food price crisis has rendered the importance of understanding and confronting the causes of food insecurity of the urban poor even more apparent. Poor urban dwellers, being largely net food buyers and depending mostly on markets for their food supplies, are particularly vulnerable to adverse food price shocks, and are consistently the group in society that suffers most from higher food prices. Urban Agriculture is one of the solutions that are perceived globally to meet the demand of food of urban population. There are a number of ways through which urban agriculture can, in principle, have an impact on urban food security. At the household level, urban agriculture can be a source of income, can provide direct access to a larger number of nutritionally rich foods

(vegetables, fruit, meat) and a more varied diet, can increase the stability of household food consumption against seasonality or other temporary shortages, and can increase the time mothers spend caring for their children, as opposed to non-agricultural activities that are more likely to be located further away from home.

Urban agriculture can be defined shortly as the growing of plants and the raising of animals within and around cities. The most striking feature of urban agriculture, which distinguishes it from rural agriculture, is that it is integrated into the urban economic and ecological system: urban agriculture is embedded in -and interacting with- the urban ecosystem. Such linkages include the use of urban residents as laborers, use of typical urban resources (like organic waste as compost and urban wastewater for irrigation), direct links with urban consumers, direct impacts on urban ecology (positive and negative), being part of the urban food system, competing for land with other urban functions, being influenced by urban policies and plans, etc. Urban agriculture is not a relic of the past that will fade away (urban agriculture increases when the city grows) nor brought to the city by rural immigrants that will lose their rural habits over time. It is an integral part of the urban system. Urban Agriculture plays an important role for making a city more resilient and safe in term of not only food and economy but also improving standard of living of urban poor by increasing mean of livelihood.

2. FACTORS INVOLVED IN URBAN AGRICULTURE

There are various factors involved in urban agriculture on which impact of urban agriculture depends on and vice versa.

2.1. People

Large part of the people involved in urban agriculture is the urban poor. In many cities, one will often also find lower and mid-level government officials, school teachers and the like involved in agriculture, as well as richer people who are seeking a good investment for their capital. Women constitute an important part of urban farmers, since agriculture and related processing and selling activities, among others, can often be more easily combined with their other tasks in the household.

2.2. Location

Urban agriculture may take place in locations inside the cities (intra-urban) or in the peri-urban areas. The activities may take place on the homestead (on-plot) or on land away from the residence (off-plot), on private land (owned, leased) or on public land (parks, conservation areas, along roads, streams and railways), or semi-public land (schoolyards, grounds of schools and hospitals).

2.3. Food Products

Urban agriculture includes food products, from different types of crops (grains, root crops, vegetables, mushrooms, fruits) and animals (poultry, rabbits, goats, sheep, cattle, pigs, guinea pigs, fish, etc.) as well as non-food products (like aromatic and medicinal herbs, ornamental plants, tree products, etc.) or combinations of these. Often the more perishable and relatively high-valued vegetables and animal products and by-products are favored.

Production units in urban agriculture in general tend to be more specialized than rural enterprises, and exchanges are taking place across production units.

2.4. Product Market

Urban agriculture includes agricultural production activities as well as related processing and marketing activities as well as inputs (e.g. compost) and services delivery (e.g. animal health services) by specialized micro-enterprises or NGOs, etc. In most cities in developing countries, an important part of urban agricultural production is for self-consumption, with surpluses being traded. However, the importance of the market-oriented urban agriculture, both in volume and economic value, should not be underestimated. Products are sold at the farm gate, by cart in the same or other neighborhoods, in local shops, on local (farmers) markets or to intermediaries and supermarkets. Mainly fresh products are sold, but part of it is processed for own use, cooked and sold on the streets, or processed and packaged for sale to one of the outlets mentioned above.

2.5. Technology Used In Urban Agriculture

In the city, we may encounter individual or family farms, group or cooperative farms and commercial enterprises at various scales ranging from micro- and small farms (the majority) to medium-sized and some large-scale enterprises.

The technological level of the majority of urban agriculture enterprises in developing countries is still rather low. However, the tendency is towards more technically advanced and intensive agriculture and various examples of such can be found in all cities.

3. CASE OF HYDERBAD

Urban agriculture is the new culture that is catching up in Hyderabad city. More than 4000 households in the outskirts of the city currently are self reliant for the vegetable needs of the family. This time Horticulture department for a change is giving subsidy directly to the citizens instead of farmers who want to grow of complete nutrients set of vegetables.

Horticulture department director K Devamuni Reddy said that the initiative as part of urban farming is met with good response since it was initiated two months back. "We give the citizens who are ready to grow a cluster of vegetables at their home a subsidy of Rs 360 and they have to spend another Rs 1200 from their pockets" he added. This subsidy kit involves four silatin round beds, red earth, farmyard manures, 14 bags and other essential things to grow a garden at home. Officials said though the citizens have to spend additional Rs 400 to 500 for transporting, response has been more than good. Mostly people in Uppal, Dilsukhnagar, LB nagar, Vanastalipuram who have own houses have shown good interest with more than 4000 subsidy kits being distributed so far. Officials plan to increase this number to another 1000 in next few months.

3.1. Challenges faced

On Paper, on reports, and on official projections, Official records all seems to be attractive and successful, but the realistic scene is completely opposite. The four areas mentioned in the news report, UPPAL, Dilsukhnagar, L.B.Nagar and Vanasthalipuram are so crowded, houses in these areas have no space for gardening or for drying the clothes, houses are built on 200 to 500 square yards have double or triple storied buildings, as these areas fetch good rents, most of the owners have rented out, tenants are not allowed to grow any trees or vegetables, very few houses on the outskirts of the city, say near Hayathnagar, Ghatkesar and others may have purchased few kits, but the result may not have been satisfactory.

4. CASE OF DELHI

The Yamuna River runs through the middle of Delhi -- India's second largest metropolis and home to a population of over 18 million inhabitants. But very few of this city's residents or visitors know that along the banks of the Yamuna live thousands of urban farmers. Contrary to what one who learns of them might assume, these urban farmers are not recent migrants forcibly displaced from rural areas and only able to find work in Delhi as agricultural laborers. Rather, they have been cultivating vegetables along the banks of Yamuna for several generations. Yet still, since they are without government identification cards and do not own the property on which they farm, these farmers are among the most vulnerable population in urban Delhi -- not only unknown, but also invisible. Despite having no access to government services, living under constant threat of eviction, and having to rebuild their houses each year after the river banks flood during the monsoons, the Yamuna farmers speak enthusiastically about farming vegetables in the Delhi city center in favor of growing grain crops in the rural provinces as they did generations ago. But with the recently opened metro stations along the banks of the Yamuna and the likelihood of new developments, the future of this vulnerable population is uncertain.

From preliminary research, one comes under the impression that there is little to no significant urban agriculture in Delhi. But as one goes deep inside will find out that there is in fact extensive urban agriculture in Delhi, and on a scale that far exceeds that of the cities that typically come to mind on the subject. Yet, urban agriculture in Delhi exists in such a way that it is both intensively practiced and decidedly irrelevant.

4.1. Challenges faced

The Yamuna farmers present a paradoxical situation. On the one hand, they are a very significant subject for urban agriculture globally in terms of the sheer scale of their production. But at the same time, there is the imminent threat of development and it is unlikely that the farmers will exist in this capacity for much longer

5. CONCLUSION

Urban agriculture, at first glance, may appear to be a fairly simple topic: Scatter a few plots about the City and let residents start gardening. In reality, however, urban agriculture impacts a community in a variety of ways, from providing food security, environmental benefits, and even modifying a city's urban form. Similarly, in spite of its seeming simplicity, urban agriculture does not just happen. To foster the development and growth of urban agriculture, a city may have to consider implementing techniques that include zoning ordinances, comprehensive plans and, in some cases, state legislation.

The take-away lesson for us is that people's livelihoods have to be at the center of any discussion about sustainability and making changes. At a most basic level the need to provide for oneself and one's family is a major driver of behavior. We need to be able to recognize this tension between short-term livelihood decisions and long-term sustainability goals and forge a path that works with people's need to provide for their families, but does so in an environmentally and socially conscious way.

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