

STRATEGIES FOR BUILDING SUSTAINABLE URBAN COMMUNITIES THROUGH HORTICULTURAL ACTIVITIES

STRATEGII DE DEZVOLTARE A COMUNITĂȚILOR URBANE DURABILE PRIN ACTIVITĂȚI HORTICOLE

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Abstract. *Present paper proposes a series of strategies as solutions that could increase food production while greatly reducing the environmental impacts of agriculture. From all agriculture activities, horticulture sector is characterized by a high biodiversity and is dominated by fruit and vegetable growing species. Urban horticulture brings together what used to be widely separated: food production and urban space. Broadly speaking, urban horticulture includes everything from small home gardens, community lots to the management of city parks, rooftop gardens, as well as the vertical way of production. This direction of production ensures increased availability of fresh products in big communities, raw material for processing, healthy diets, improved food safety, lower costs for transport, better use of resources, and mitigation on environmental impact of agricultural activities by reducing the emission of greenhouse gases.*

Key words: sustainability, urban communities, horticulture, strategies.

Rezumat. *Lucrarea de față propune o serie de strategii ca soluții care ar putea crește producția de alimente, reducând în același timp mult impactul agriculturii asupra mediului. Din toate activitățile agricole, sectorul horticultură se caracterizează printr-o biodiversitate ridicată și este dominat de specii pomicele și legume. Horticultura urbană reunește ceea ce înainte era larg separat: producția de alimente și spațiul urban. În linii mari, horticultura urbană include totul, de la mici grădini private, loturi comunitare, până la gestionarea parcurilor orașului, grădini pe acoperiș, precum și modalități de producție pe verticală. Această direcție de producție asigură o disponibilitate mai mare a produselor proaspete în comunitățile mari, materiile prime pentru procesare, diete sănătoase, siguranță alimentară îmbunătățită, costuri mai mici pentru transport, o mai bună utilizare a resurselor și atenuarea impactului asupra mediului al activităților agricole prin reducerea emisiilor de seră.*

Cuvinte cheie: susenabilitate, comunitati urbane, horticultura, strategii.

INTRODUCTION

Previous research has shown that an understanding of the horticultural plants and horticulture based activities can lead to improving the ways of sustaining people's health, well-being and quality of life (Aldous, 2015) and these are the steps that help building sustainable urban communities.

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It is known (Hayashi *et al.*, 2008) that horticultural activity improves the quality of life for all people of all ages by beautifying neighborhoods, stimulating social inter-action, producing healthy nutritious food, encouraging self-reliance, conserving resources, and creating opportunities for recreation and education but in the same time these activities are considered economically viable ways of production (Torquati *et al.*, 2015 and 2016).

Agricultural production and horticultural production in particular comes as a necessity as the population is continuously growing as the land has a limited use.

Vegetable and fruit crops are ideal for efforts to improve nutritional and economic outcomes. A diverse diet including at least 400 grams of fruits and vegetables daily can prevent malnutrition, due to their high vitamin and mineral content (Silva Dias, 2011).

MATERIALS AND METHODS

For this study I focused on collecting data from the competent authorities, processing documentation and general information from specialized literature and data analysis from available data base in order to came up with a plan that could fulfill the general aim of our reserch.

Through this study we try to set out a new direction on building strong urban communities by developing the green spaces, centered on the citizen, wishing to become a way for cities to cope with climate change, food and nutritional security, biodiversity management and human prosperity interconnection.

RESULTS AND DISCUSSION

With population growth and increasing consumption, huge demands are placed on agriculture and earth natural resources. Presently, around 15 % of world population is suffering of chronicall malnourishment (FAO, 2024) while our agricultural systems have a degrading impact on land, water, biodiversity and also general climate on a growing scale. To meet the world's future food security and sustainability needs, agricultural and food production must increase significantly, but at the same time protect the environment. This is why we have to find strategies and solutions for a sustainable cultivated planet and urban communities and urban farming could be such. It would be fundamental to find and implement a tool for a sustainable recovery of degraded areas, by using landscaping that includes spaces dedicated to urban horticultural activities. Negri *et al.*, 2008 proposes to integrate wild plants and landraces conservation in small farming system as better use of resources and loss reduction. Using wild plants or underulitized species is a current trend in Mediterranean urban vegetable gardening models (La Malfa *et al.*, 2010) that could succesfully adapted and used in the rest of European countries as the climate change imposes a new zoning of cultivated species.

As result, this preliminary study proposes a serie of strategies and their interdependence in building sustainable urban communities through horticultural activities.

Linking the information and folowing population demands and preferences, using figure 1, we tried to show through a graphical representation the main activities that could be involved in the adaptation of some strategies and the way they interconnect in order to drive to an integrated model useful for building sustainable communities.

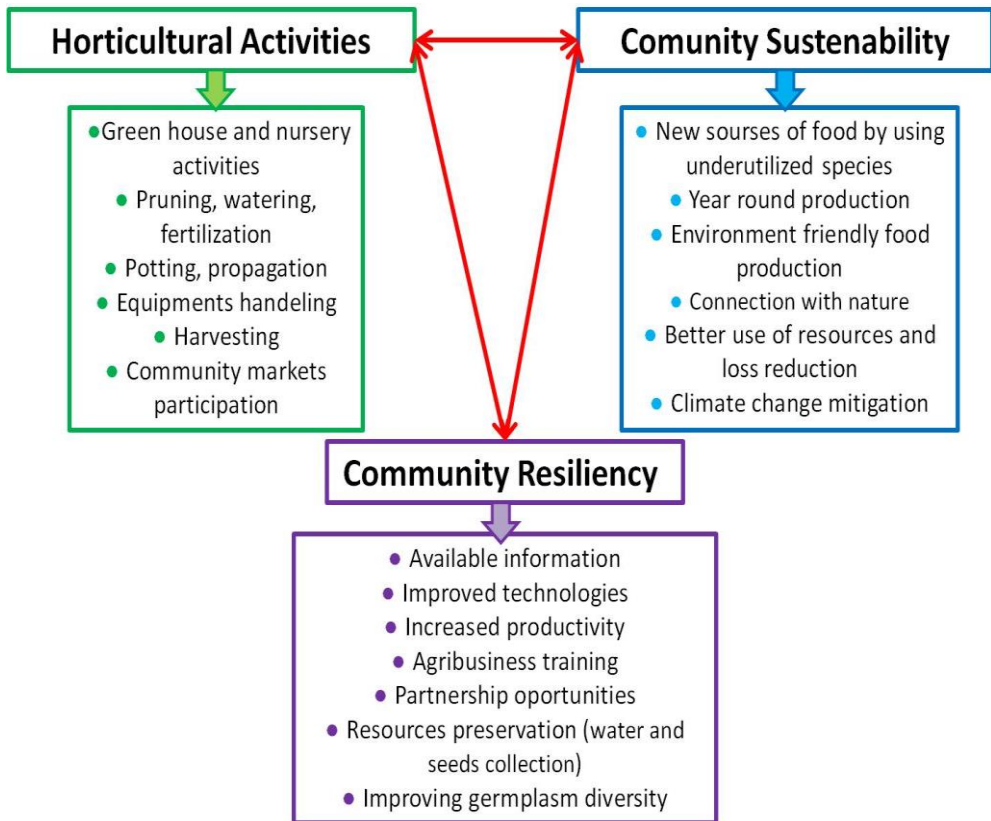


Fig. 1. Integrated strategies for building sustainable communities through horticultural activities

Use natural resources in a responsible manner effectively increase awareness and connection with nature which is benefic/crucial, especially for young generation that are affected by the overuse of devicees. This is why we need to understand urban green space as a health resource and its contribution to well-being (Irvine *et al.*, 2013; Kothencz *et al.*, 2017).

Zasada (2011), also states that a theoretical approach, academic speeches and courses and subjective points of view related to horticultural activities are

important steps in understanding the wide variety of diversification activities and approaches in the complex context of the environmental, social and economic functions of agriculture. As adaptation measure to the post-productive, consumption-oriented increasing demands of urban society, urban producers and peri-urban farmers have intensified their uptake of multifunctional activities.

Torquati et al., in a comparative study underline that heterogeneous local food farms, food production in family farming, integration of local and organic food production in social farming are common business models (small shops, local products taste events, workshops, wine bars and coffee shops etc.).

These strategies, together with family farming and local food production bussines models are useful tools for offering benefits in maintaining sustainable urban communities, as these services and oportunities contribute to local development firstly because the information is available, than partnership oportunities can be developed and later formulated agribusiness training programs. Resources preservation (water and seeds collection) is a secondary but as well essential impact of these activities (Artuso, 2015).

Timpanaro (2015) and also Specht (2016), declare that social farming activities can be a useful example of sustainable development for local communities as they drove to the construction of an active relationships network that is able to involve the interested players within the complex process of social services transfer.



Fig. 2. Using fruit growing species in garden design
(photo: Ina Asiminei)

Figure 2 present an example of how shrubs can be introduced in small garden design and because these species has a superficial root system, they can easily be used for rooftop gardens. This could contribute to greener cities with all the positive effects that derive from this.

CONCLUSIONS

The results show the importance of urban horticulture in the overall supply of the most perishable products as berries or leafy vegetables. In addition, keep population and implicit community involved in activities that have a positive efect on their health.

Developing a plant production system that needs fewer pesticides and fertilizers also contributes to a healthier diet, helps in building confidence between farmers and consumers in terms of food safety.

Production has higher availability for local consumption (shorten the transport distances), meaning more fresh and healthy food for population.

Increasing the green spaces in urban areas with indirect but so significant positive effect on population phisic and pshyological health, as the use of natural resources effectively increase awareness and connection with nature.

Provides valuable information for the consumers and partnership oportunities.

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