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GREENING SURFACE IN ORDER OF SUSTAINABLE DEVELOPMENT AND ENVIRONMENTAL PROTECTION IN URBAN AREAS

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Abstract

In this paper will be covered the previous works on the preservation of the environment of city urban areas, which can mobilize resources of urban agriculture. The need for creating favorable environment for human life in the last decade become a key issue, ie. how to repair the problems of environmental pollution from the products of human activity, and how to change the an awareness of such a lifestyle. The reduction of green areas, with a disproportionate increase in the number transport vehicles and pollution from agriculture and other economic activities, inducing specific "urban" environment. Its characteristics condition the temperature rise of 2-6 degrees of cities, increased concentration of pollutants harmful to human health, as well as the disappearance of plant species typical for the locality. In order to increase the surface area covered with vegetation, and in accordance with horticultural principles, characteristics can be used for special purpose lawn. The lawn is an integral part of bio-gases, which fully reflects, by combining vegetables, flowers and ornamental trees. It is therefore important to know the possibilities for utilization of grass species, as well as respect for the calendar works entering the lawn and measure their recovery in order to get the desired results. In this way will be possible to integrate the point of production from the standpoint of environmental protection. With respect to the concept of urban and peri-urban agriculture, with food production in urban conditions, together with landscaping of public and private property there will be favorable conditions for sustainable development of rural and urban areas.

Key words: *environmental protection, sustainable development, Urban and Peri-urban agriculture*

INTRODUCTION

United Nations (UN) identified over 40 different forms of agricultural practice: from gardening (fruit and vegetable production), through aquaculture (fish farming); from small garden for a household to large garden that can be used for the production for sale (market), including raising of livestock species - from birds, rabbits and goats to the breeding of snails, silkworms and bees breeding. Food production in cities are dealing with almost 800 million people, which produced about 15 % of the total world food production. FAO defines urban agriculture as an economic activity based on production, processing and sale the food and fuel for needs of consumers which mostly living in urban areas. Production is carried out intensive methods of production in smaller areas, the use of land and water dispersed within or around the edges of cities, as well as reuse of organic waste. Urban agriculture involves works within the agro-forestry and horticulture. In the last decades the problem of the urban areas is in high concentrations of air pollutants and increased air temperature lead to reduction of green areas that represent the "*lungs of the city*." As the question arises how to solve the problem in future pollution, considering that the population in cities increased migration from rural areas.

Increased emissions of pollutants into the air, constantly increasing the temperature and noise, disturb the quality of life for residents in urban areas. Every company is faced with the problem of increased human activities, in pursuit of profit forgotten the basic principles of nature and resources, who on earth is limited. Products of agriculture, can be partly used in the cycle of reusing, but products of other economic branches deteriorate existing ecological condition of the environment. In addition to these activities are extremely important in providing food for the population

of the city, and its importance in the recycling of urban organic waste, local authorities often prohibit the production of food in the cities or to her treated as a necessary evil. With few exceptions, food production in cities until recently occurred without institutional help of agricultural experts and urban planners. More than one third of food in rich countries end up as trash (rest of the food, food with an expired shelf life, waste of food preparation). The majority of municipal waste is actually organic and his collection, removal and disposal of spent a significant portion of funds from the city budget. Decomposition of organic matter in landfills produces methane, the gas that affects global warming and climate change, and who as a gas with greenhouse effect thirty times more harmful than carbon dioxide.

MATHERIAL AND METHOD

The work will be included in the present knowledge about the environmental situation in the Republic of Serbia, as well as opportunities for further development, based on data representative of the state institutions in the field of public health and agriculture. Discussion is planned in a holistic approach to the collection of literature and analytical separation of the results obtained.

The most important role in implementing sustainable development strategies have local communities, through the institutionalization of the action plan called "Agenda 21". Agenda 21 is covered by 115 different and specific programs designed to facilitate or force on sustainable development. The plan included work on the burning issues of our time, but also aims to prepare humankind for the challenges in the future. It reflects a global consensus and political commitment at the highest level on development and environmental cooperation. Its successful implementation is first and foremost responsibility of government. National strategies, plans, policies and processes are crucial in achieving this. International cooperation should support and supplement such national efforts. In this context, the United Nations has a key role at the global level. Other international, regional and subregional organizations are also invited to contribute their engagement sustainability efforts. The broadest public participation and active involvement of NGOs and other groups should also be encouraged. As an integral part of Agenda 21 states and the concept of green economy, which is defined as one that transmitted a small amount of carbon, and the efficient use of natural resources and which is socially inclusive, with the widespread application of renewable energy sources, increasing the number of jobs and investment in so-called *green industries*.

The Republic of Serbia aims to promote policies and programs, economically viable and environmentally safe energy systems (particularly new and renewable energy systems), which will contribute to the development of energy efficiency and rational use of energy.

Therefore, application of the concept of urban agriculture through the use of institutional package of measures at the local level, will contribute to increasing awareness and improving the habits of the people, as a strategy for employing people, reducing crime and improving living conditions in cities, with special reference to rural areas.

If we decide to design the city in accordance with the concept of local food production, we will open additional opportunities for development. The formation of horizontal gardens will impact positively on the climate in the facility at which it is inserted, open the possibility for the accumulation and refinement of atmospheric precipitation can still be used for irrigation, as well as technical water for the facility, or even as drinking water.

One of the directions of the implementation of agricultural development activities in the field of harvested areas is the insistence on the aesthetic and decorative contents of the field, especially in the vicinity of important contemporary and historical. The greening areas in urban environments interfere with the concepts of landscape architecture, according to which the fon - lawn - the basis on which all others are sorted design elements of space (buildings, trees, shrubs, flowers, small art forms, plastic, etc..). Emphasizing the process of greening cities condition the increase in seed production, which will intensify the process of

agricultural production, which can be compatible and overlap with other industries. The greening of urban areas will cause a reduction in the presence of indicators of environmental pollution.

RESULTS AND DISCUSSIONS

The identity of an urban area can give greenery. Green infrastructure, just like any other are strategically planned. Green areas are multifunctional resource that improves the quality of life in the community and support its sustainability. The importance of urban green spaces in the process of preserving a healthy environment and human health is great. They in the form of parks the nature and forestsabsorb a large amount of carbon dioxide from the atmosphere, affecting a certain percentage of humidity and temperature (reduced temperature microclimate city to 2-6°C), preventing soil erosion, are important for biodiversity conservation, etc.. Green areas and protection can separate the residential from the industrial zone. World Health Organization (WHO) recommended level of greeneng cities from 50 m^2 of urban and 300 m^2 of suburban green space per citizen (Lješević, 2002.).

Grasslands for a special purpose, are from great importance for the visual-spatial integration of villages and districts. The importance of grasslands is manifested through the increase of space, clear visual perception of nature areas, physical separation and protection from environmental influences, prevent passing, etc.. We can not exclude the importance of protective-erodible, which is reflected in the protection against abrasive erosion (water): the high slopes and coastal forts, as well as protection from the wind (wind erosion) to easily movable land, on the landfill of industrial ash dumps, ore tailings ponds etc.

For the establishment of efficient and easier to maintain green lawns in public it is necessary to choose a good mixture of herbs for specific environmental conditions and grassland categories. In practice, today more attention is paid to this requirement, which was not the case. This is contributed to the grasslands difficult based, and short-lived.

Should be taken care about results of foreign authors, because can not be fully applicable to local conditions, because it can lead to reduced yields and loss in the aesthetic and decorative characteristics. They can be used for comparison with results obtained in a local practice in all areas in which the production of grass for landscaping can be applied.

Grasslands in the urban divide is considered decoration, the most memorable part of any garden, park, etc. It is therefore important to set out the facts supporting the important question of their use.

The division of turf of horticultural importance by way of use is as follows:

- Decorative
- Recreation
- Functional

Horticultural greenery according to the place and method of use combine urban, suburban and interurban greenery in the urban greenery, we find:

- Parks (central and no region),
- Block greenery (between the buildings and gardens),
- Greenery square and the street (along the road, in front of buildings, greenery along the river banks and channels, etc..)
- The greenery of the special characters (with public institutions, schools, industrial facilities, cemeteries, etc..)
- Green areas in the form arboretruma, botanical gardens and zoos,
- Gym facilities (playgrounds, school gyms, sports centers and general recreation areas, etc.).

Blades of grass, which are the basis of green cover and which are necessary for raising, have these basic characteristics:

- low growth habit,
- expressed višegodišnjost,
- the ability of education of a stable meadow,
- a good recovery,
- tolerance to frequent and low mowing,
- tolerance to trampling,
- ornamental value.

Is necessary to keep in mind that the grass cover is observed in the field and we want to rearrange it, because the lawn must be aligned with other species and the environment. *Lux-*

grassland are grasslands of the first type formed on the soils that are favorable morphological characteristics, with surface roughness and without a fully unified by color and floristic composition, free of weeds, stains, and a bunch of countries. In categorie of lux grassland are included fine, dwarf grass, regular leaf nervature. These are decorative lawns, beautiful looks, who can not tolerate trampling. Grass for fine lawns are composed mainly of species of Bent, Fescue and Meadow grass. These are the following types: - Creeping bentgrass (*Agrostis stolonifera, L.*), - Common Bent (*Agrostis tenuis, L.),* Velvet bent (*Agrostis canina, L*), and the type Red Fescue (*Festuca rubra, L.)* and Hard Fescue (*Festuca ovina, L.*). The common characteristic is that the cluster-type rice, that are widespread in nature, and they are also cultural mixtures. Do not tolerate drought and require lots of water. Express their decorative leaves. It is therefore extremely important to make an excellent soil preparation and provide favorable conditions for quality breeding, because they require daily care or lose their use value. The regular park lawns, which are used in resorts, picnic grounds, on squares, in front of public buildings, etc.. Associations that make this type of grassland species in the genus counted ryegrass and meadow, which is characterized by increased wear tolerance, although they may be sensitive to lack of soil moisture. Characteristic is widespread in nature and easy to maintain in the cultivated lawns, where they can be used very extensively. Utilization of grass is profitable, because abundant large number of available species and it is possible to make mixtures with precisely the given characteristics to length of use, purpose, quality, production intensity, frequency of use, etc.. (Jovanovic et al, 2012., P. 132). Application of this method of greening cities, greatly reducing the lack of fresh air, with a high quality living conditions.

In practice is not usually to use the weed species for the greening process in certan area, precisely because competition to the cultivated plants, which are on lawns for special purpose commonly used. In landscape architecture, the importance of weeds is far greater, precisely because of their quick adaptability to external conditions, low requirements for maintenance and to establish the aesthetic value of the urban environment. Owing to the diversity of shapes and sizes the weed community, interesting appearance, color and etc..; the world of weeds can often contribute to alleviating a number of deficiencies in the urban environment. Especially if it is green roofs, which is a common practice in the European Union. The economic benefits of greening roofs lie in the fact that the plants on roofs last longer, a reduction in costs for the removal of precipitation water, and reduced costs for heating of buildings. Any lowering of temperature by 0.5 º C can reduce the amount of electricity by 8%. The studies that were conducted in Canada, the roof-storey building, showed that the roof is covered with grass, with 10 cm of substrate (soil for the time being), 25% reduced need for cooling during summer in relation to a building with no verdant roof.

For plant species that grow in urban areas there is a technical title-sinurban vegetation. According to these data, the condition of green spaces in urban areas in the Republic of Serbia is bad, although there are resources to implement the urban development projects and the re-greening of public spaces. Each of the above mentioned aspects is equally important to achieve the ultimate goal - improving the quality of life. Most common are the so-called green areas first association of a green city. City parks, park-forest, grassy areas, playgrounds, recreation areas, landscaped gardens, botanical gardens, private, public or semi-public courtyards and so on. These are the places that are an oasis of peace, or anti-stress games and recreation.

Reducing the effects of human activities, such as the increased presence of pollutants such as carbon monoxide, carbon dioxide, nitrogen oxides, phenols, etc., then cutback intensity noise generated by traffic and the efficient utilization of land in the future will represent an important development strategy urban areas.

Taking advantage of knowing the grass species and their ability to survive in the often very ungrateful of urban life, but will initiate investments in environmental protection and development of agricultural production of quality seeds, with characteristics that are

necessary for proper lawn. Special grasslands, which are used to disperse terrain-park, urban lawns beside roads, and ultimately the courts for sporting purposes, require knowledge of the characteristics of plant species-grasses that are most important. Proper soil preparation, which includes the land on which the seed is to be the ideal structure, the particles of soil must not be larger than the size of sand particles, free from admixture of construction debris and dirt, prihranjeno adequate amounts of mineral and organic fertilizers. The process of drainage field is carried out on areas where it encounters the presence of heavy soil that is clay and water-tight, in which plant roots will not grow and there are not enough nutrients.

Raising the green space by using the technique grass carpet is the quickest and best way of greening, because the fastest turf grass root, leaving the seeds of weeds that are activated, even if found in the soil. Since the terrain, the purpose for which the person chooses will depend on the quality of work.

In this way, the concept of sustainability of urban areas, with the concept of environmental protection, pollution reduction, resulting from the activities of human life, affects the activation of urban agriculture, which will trigger some other economic activity with which they are in a close relationship.

CONCLUSION

Planting areas in urban areas, provides great opportunities for the development of urban and peri-urban agriculture in all cities. The concept is easily adjustable in all areas, because it affects the applicability of the principles of sustainability and environmental protection.

Looking at urban areas as separate entities may be noted that in cities there is a marked difference from the suburbs and countryside. This distinction is based on "urban climate", which causes higher temperatures and increased pollution due to human activities. In order to minimize adverse effects on quality of life, reduced activation of the sustainability of urban areas, by putting the most important concept that will ensure a balanced development between socio-economic progress and protection of urban environment.

Using every inch of free space for landscaping or bringing any agricultural production, We will make significant progress in the intensification of human resource development (job growth) in the world crisis.

Environmental benefits of investment in green lie in reducing the pollution of urban areas, reducing konecntracija pollutants in the air, reducing temperature to 2-6 ° C, reducing noise. Reducing the presence of harmful compounds such as methane gas, carbon dioxide, carbon monoxide, phenol etc. Will affect the state of repair in ecological terms.

Encapsulation field grass for special purpose, which is dominated by fine-leaf plant species nervatura, achieves the decorative aesthetic significance, promotes the quality of life and mitigate the changes in the fauna, ie. maintain the genetic potential of a particular plant species.

The concept of sustainability of urban areas is a green city designed as an oasis, which works great in green ekomije system, which exploits the positive features of human activities, and products that could potentially degrade the environment, re-utilized in the recycling process (use of secondary raw materials from agriculture).

Possibility of applying the principles of sustainability, re-start the production process, increasing the number of jobs (mobilization of radon-age population), positively will increase the awareness of limited resources in the communities where we live. Protection of the environment, creating a green city, in the green economy, one of the parameters of inclusive empowerment of social economy, which touches every aspect of human action.

Prominent production characteristics, the modeling of the usage in urban areas, makes a wide range of usability and affordability.

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