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Methods of Improving Green Walls on the Territory of Uzbekistan

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ABSTRACT: This article is about creating green spaces.

KEYWORDS: Green area, technology, smart city, vertical landscaping, recycled natural fibers, awning, pergola, landscape, aristology.

At a time when Uzbekistan is rapidly changing with the help of modern technologies and improving the living standards of the population, our natural and climatic conditions are increasingly polluting the atmosphere with various chemical gases. Our country, which is in need of oxygen in times of crisis, as well as the development of green architecture in the world, is not only a matter of time, but also a matter of urgency. and reproduction gives good results. In this regard, the main topic of our article is the introduction of green walls in the beautification of our city and a great contribution to the methods of their improvement. The practical significance of our article is that it not only demonstrates the attention paid to the construction industry, but also justifies the need for further development of the industry. Currently, the amount of carbon dioxide in the air is increasing in urban life, increasing the number of oxygen-producing plants, measures to create a green world on the surface of residential and public buildings under the programs developed by our government.

In today's era of rapid technological development, the development of green architecture is facing the challenge of nature in our daily lives, when the earth is increasingly covered with various harmful chemicals in the atmosphere, and the human body needs oxygen. Based on the study of solutions to reduce carbon dioxide emissions from plants and factories and automobiles in our country, to produce phytoncides, to provide moisture, to reduce radiation from sunlight, to return light, to improve green walls and green roofs in our country I got it. The beneficial side of green walls is both ecologically and aesthetically useful for people who are interested in diseases and beauty, as well as in the creation of useful zones in large gardens and parks.

We know that to date, emissions from vehicles are harmful to the human body. Today, on average, one in two families in Uzbekistan has one car. Therefore, in the creation of a recreational zone, it is necessary to carry out landscaping, taking into account traffic and roads. The importance of this is that, as mentioned above, the presence of a lot of dust, dusty winds in the desert area also has a negative impact on the surrounding urban environment, and in addition, the influx of toxic gases from the car increases. Planting and

propagating plants that clean the environment by retaining these gases on highways is also effective.

In developed countries around the world, such as Japan, Russia, Spain, Italy and China, green walls and green roofs are widely used in the aesthetic decoration of buildings and the rational use of environmental efficiency. At a time when green architecture is becoming more widespread, a lot of creative work in this area in Uzbekistan encourages us to mobilize our youth. In particular, the example of green architecture from abroad is the project "House on the Hill", built in 1974 in Yorkshire by architect Arthur Quormby in England in the 70s of the XX century. If we take the example of green roofs built in France and Germany, launch a system of green walls and green roofs in our country, it is expedient to increase the level of study of the current problem of our research and improve its practical application. we would be.

The novelty proposed in the article is that, given the fact that Uzbekistan is a sunny country, the study of the strong radiation and the historical origin of green walls for human health in our country and abroad, and its application to modern architecture, smart city to develop solutions to improve a new form of the right approach and to select plants specific to this solution and to create its composition in the external and internal environment according to our national style.

So, first of all, let's get acquainted with the plants that are suitable for our climate in order to create green walls in the regions of Uzbekistan.

Suitable plants for green walls: Aglaomorph, Aglaonema variable, Asparagus Kirrus, Half asparagus, Wolf alloy, Asparagus Sprenger, Hypoesthes, Guzmania, Davallia, Zebrina, Paporotnik, Cryptantus, Red-leaved, Ludizia, deciduous, Maranta tricolor, Peperomia elongated, etc. Such plants are fully adapted to our climate and can be used in the organization of green walls.

Of course, this is not all plant species that can be used for vertical landscaping. However, these are the species that have shown themselves to be the most resilient and preferred in our home environment. If beautiful and healthy plants are used, it is necessary to create favorable conditions for them. They have the following advantage;

- Economically and environmentally good;

- Very durable and light to carry;

- Fills the storage space;

- Can live comfortably in pots made with a mixture of recycled natural fibers and recycled utensils;

- It is easy to breathe the roots of trees, shrubs, plants for good growth;

- Keeps plant roots cool in summer;

- In bio-degradation is once planted in the ground;

- Large drainage is created to prevent irrigation;

- Spends more than 20 months on the ground, and longer in the interior;

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- Equipment made of 100% recycled material can be used;

- Can be replanted and replanted;

- Allows water to evaporate;

- Auto-cut roots and prevents root rotation;

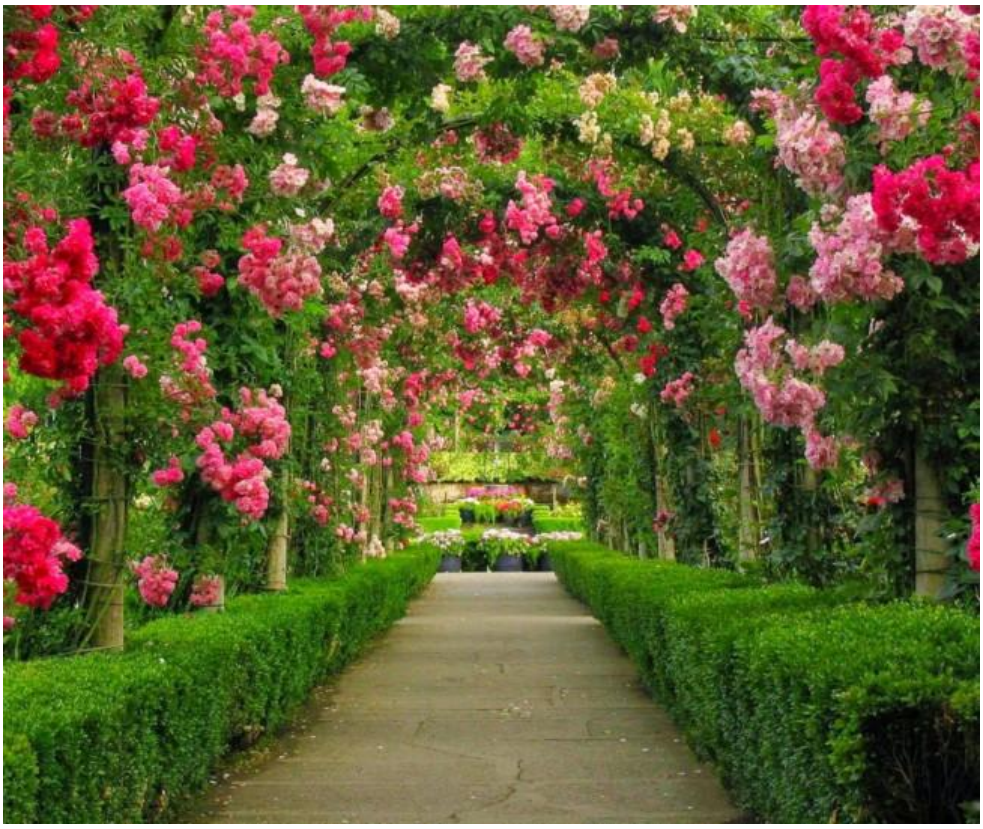
-Allows evaporation cooling in hot regions and provides thermal insulation in cold regions;

- Forms a high and fibrous root structure;

- Capable of closed storage;

- Can also be used in water basins.

We can create a composite solution by placing these plant species on the surface of the outer wall according to such methods as container, block, florarium, carpet, column. Most of the plants listed in the table are more suitable for indoor conditions. However, among them are Aglaomorpha, Aglaonema variable, Asparagus kirrus, Semi-asparagus, Wolf alloy, Asparagus Sprenger, Hypoestles, hypokirta, Nematantus smooth, Guzmania, Davallia, Zebrina, Columney Kyus, Cryptantus bivitonus, phylophendiope species, peperomia , chlorophytum, many species of fittonia, cissus species can be used to create a unique landscaping composition when used to create a composition on the outer green wall.



Arches decorated with lianas and rose bushes.

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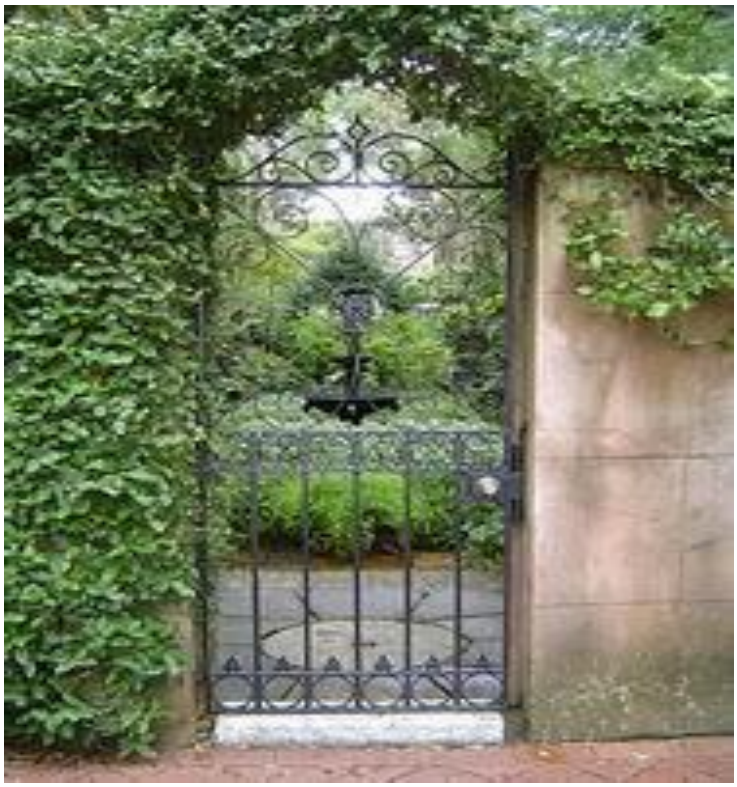

Surrounding the fence with lianas.

Liana is the best forming and elastic plant, it is always convenient to buy, even when there is not enough space for planting, even when the surface is covered with asphalt and covers a large part of the urban area. is a type of plant adapted for. Lianas ascended to a height of 25 meters and, conversely, served as soil-blooded plants

is a type of plant that can hide different layers of the garden. Unlike trees and shrubs, which are resistant to long flexible injuries and have a certain root system, they can support the most complex forms or grow to suit the surface. Among the lianas are annuals and perennials, which are divided into 2 types: 1-year-old and woody-bodied (the body is woody for many years and lives for many years). Characteristic features of lianas are the light thickness and flexibility of the root, which can not hold without supporting the vertical position, as well as a strong growth ability (in some lianas up to 15 cm per day). Growth characteristics depend on the determination of high liana requirements for soil fertility, hydration and light, but in some good semi-shady places plants such as actinidia kolomikta, devichiy grapes five-leaf, lemongrass China, dioskoreya Japan and even full In shady places can live aconite curly, aristocratic, sweet-bitter paslen plants. Lianas are an integral part of the development of a new plot of land, and if the construction work is not yet complete, we can create a pergola or beams from lianas to create shade in the creation of flower gardens, and to pass the task of preserving plants growing in the shade. The set is usually made of perennial wood lianas, but if the task is to achieve a decorative effect quickly, the choice will not be too great. Other species grow very slowly in our zone, especially in the early years. Therefore, in the first stage we can use annual vines or different types of combinations, for example, the combination of flowers with annuals and perennial lianas makes these annuals another decorative annual plant instead of the next year. Our decoration does not require a lot of money and effort. The main thing is that the lianas help to quickly achieve a good appearance in the background. Fences of creeping plants can be used not only to define the boundaries of the area, but also to separate

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functional areas - even in the creation of green rooms, which are very popular in recreation

Cover the fence with lianas.

areas, economic zones, gardens or regular French gardens. used to create a specific subregion. For this purpose, if the wooden fences, plastic nets, willow and walnut complexes are in the form of weaving, we can make the garden aesthetically pleasing by using intertwined plants to cover them. In creating such a landscape, you can use the same grapes, for example, clematis, codonopsis in the form of clematis, foreign nasturtium, ipomey, adlumiya, kobeya. For example - we can combine two different flowering lianas that match the color white and pink. A favorite method of some British designers is to place flowers and clematis together. If the recreation area requires care for landscaping, we can arrange the original landscape in the form of a "cable car alley". To do this, roughly recycled wooden poles are tied together with ropes (or chains) and we can take a sample, for example, by showing a landscape decorated with lianas with flowers in a famous garden in France.

Grapes planted on the walls of buildings not only decorate the structure, but also protect the walls from excess moisture and overheating, prevent the ingress of dust, create a comfortable microclimate, clean the air and fill it with oxygen and phytoncides. At the end of the season, large, decorated with fruits, decorated with different leaves or petals, allows you to get a live tapestry effect when decorating the walls: Amur grapes have two different leaves - full and 3-5-lobed, in autumn they turn a beautiful purple. In September-October, delicious blue-black fruits ripen in bunches up to 25 cm long. This liana provides annual growth of up to 3 m on any surface, even in the glass layer, and in the larger case can occupy 2 vertical surfaces of 20 m.

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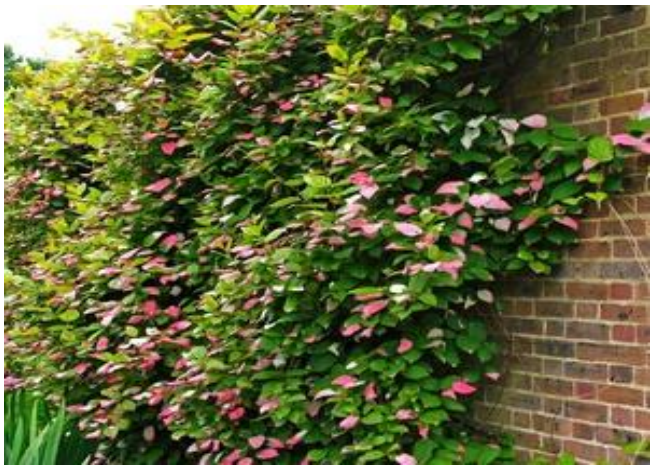
Actinidia is a chameleon plant in colomica, the leaves are bronze when flowering, then green, covered with large pink spots after flowering, then raspberry. It blooms with white fragrant flowers and gives very tasty useful fruits that are rich and high in vitamin C. There are effective fruit varieties that produce 5 kg of fruit per plant, and its height can grow up to the height of a two-story house (10-15 m). Another species, actinidia, is a polygonal leaf with a silvery-green shade of leaves during flowering and fruiting, covered with white spots before flowering and turning yellow in autumn. But this species is less common in our region, and orange fruits, like sharp-nosed peppers, do not always have time to ripen. A round-leaved tree can decorate the entrance to the house in the fall, with large leaves, bright yellow, with leaves and decorative yellow-orange fruits. This strong fast-growing liana rises to a height of 10–12 m. There are many species of actinidia, which belong to the family of woody lianas, and now we know about 75 species. One of its cultural fruits is kiwi. Common in Southeast Asia, around the Himalayas.

In addition to the picturesque living walls and fences in the landscape view, there are many other garden structures for vertical landscaping - the simplest of which are vertical sheds, pavilions and pavilions in the form of wreaths, columns, obelisks, pyramids and pergolas. can be included in the types of landscaping. Here you can show imagination, taking into account the biological characteristics of each plant - the requirements of light, the method of care should also be given special attention. A pergola or arch can be an advantage of a flower garden and can decorate the beauty of the house. A number of such structures can pass from one part of the garden to another. You can use other supports for lianas. For example, we can use lianas for wall surfaces, stone structures, wire columns, and even garden sculptures. Conversely, the simplest stone is a dried tree or a high sand dune. Some vines grow successfully on the crowns of old trees - short clematis, for example, the Siberian prince. The Daurian family fills the gaps between trees and shrubs. The green curtains of lianas serve as a great background for planting perennials. Vertical green walls created with high taste from lianas such as Delphinium, liatris, naperstyanka, buzulnikom, Veronica, Mullen, derbennikom, it is desirable if they were cared for by several plants.

Polygonal Actinidia.



Actinidia.

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The range of lianas for vertical landscaping includes the following: Baljuan, akebia, bare bugenvil, medicinal jasmine and golden jimolost, Japanese Henry, root and large-flowered camphor, Japanese birch root, trachelospermum Yasmin At a temperature of +5 ... + 12C, in early spring in a light room with moderate humidity and moderate temperature - only the plants need to be provided with conditions for winter storage. In summer, the containers are placed in the garden, balcony or terrace, and drip irrigation system is set up.

The following plants are used in vertical landscaping: wild grapes of different varieties (vines), amur vine, "obvoynik", lomonos, jimolost-caprivol, actinidia, kirkazon (aristology), plush, limonnik, etc .; in the landscaping of balconies and porches, as well as annual, creeping plants: nasturtium, ipomeya, Japanese hmeli, pumpkin (lagenaria), fragrant peas and beans. But the full scenic appearance of these plants is manifested in mid-summer or autumn. In addition to these plants, there are many other types of plants. They are very useful in creating a composition for a green wall.

T/r	Name of plant	Demand for care	Adaptation to climatic conditions	Outdoor compatibility	Compatibility with the interior
1	Amur grapes	+	+	+	-
2	wild grapes	+	+	+	-
3	obvoynik	+	+	+	-
4	lomonos,	+	+	+	-
5	jimolost-kaprivol	+	+	+	-
6	aktinidiya	+	+	+	-
7	kirkazon	+	+	+	-
8	plyush	_	+	+	-
9	limonnik	-	+	+	-
10	japan hmel	-	+	+	-
11	lagenariya	+	+	+	-
12	Chinese rose	+	+	+	+
13	nastursiya	+	+	+	+
14	ipomeya	+	+	+	-
15	petunia	-	+	+	+
16	bakopa	-	+	+	+
17	begoniya	-	+	+	+
18	lobeliya	-	+	+	+
19	pelargonium	-	+	+	+

Table 1. List of the most suitable plants for vertical landscaping

It is recommended to use the following plants for landscaping of terraces and pergolas: from wooden stems - vine (grape), lunosemyannik, lomonos (clematis), jimolost-caprifol, aristology, creeping roses and creeping hydrangea; from herbs - hmel, tladianta, brionia; annuals - ipomeya, turkey beans, fragrant peas.

While most creeping plants need special support devices, some: plush, lomonos, and others have devices that grow on the walls of buildings.

If we improve the landscape in urban areas by using green walls, we will be able to reduce the amount of toxic gases and dust that are released into the environment and give humanity an aesthetic pleasure.

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