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Use of Tree Plants in the Organization of Landscape Design in the Regions of the City of Termiz, Surkhondaryo Region

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Abstract: *When organizing landscape design on the territory of the city of Termez, Surkhandarya region, the issues of landscaping and landscaping were studied; suggestions were given on the choice of plants for parks, alleys and alleys depending on climatic conditions.*

Keywords: *Massifs, landscape groups, solitary, (soliters), plants used in the organization of hyobones, live walls, vertical greenery, and floral compositions.*

Introduction. The following groups of tree and shrub plants are mostly used in the formation of objects of landscape design of the city of Termiz: massifs, landscape groups, single, (soliters), plants used in the organization of avenues, living walls, vertical use reed beds, flower compositions.

Main part. *Massifs* are groups of trees and shrubs of one or more species that grow over a significant area. Arrays, as a rule, carry out functions that separate and protect, divide areas, mask, create a background of decorative accents, they are used selectively from fast-growing varieties (spear maple, oaks, hemlocks, spruces, pines months). There are two types of arrays - simple and hard.

Simple massifs consist of the same height, common decorative symbols. Such a massif can consist of common aspen, banded and red oak, common pine, maple.

The complex massifs consists of trees of different heights and decorative qualities.

A two-tier massifs can consist of the following classification: birch on the first tier and common spruce on the second tier; common pine in the first tier and small-leaved linden in the second; banded oak in the first tier and common grub in the second tier, beresklet with immature coral wood. When calculating the density of crops in the massif, it is necessary to create conditions for the free formation of each copy, that is, to place the trees at a distance of 4-8 m from each other.

Landscape groups - a free composition of trees and shrubs. It is divided into tree, shrub and mixed groups. The group includes plants from 2-3 to 10-12 m. Groups can be contrasting or homogeneous, thick or sparse. The perception of groups as one of the main elements in the composition of the landscape creates a wide range of possibilities for their composition.

Solitaire (from the French meaning “seclusion, solitude”) is a solitary tree or shrub planted separately from a massif or trees. Copies of solitude (solitaires) are biologically full and decoratively meaningful trees, and should reflect the maximum characteristic of appearance.

Solitaire placement methods can be very different. Single trees can be placed in the center of a small meadow, in which case it should be of primary or secondary size with dense crowns. (these can be birch, chestnut, etc.). A lone tree on the side of the road marks its turn. The shade of a tree with spreading branches can create revitalization on the beach path of a recreation area or pool.

Sidewalk plantings are used in the design of sidewalks and avenues. Avenues should be divided in the following order: the main ones - interconnecting different designated target areas; second level - leading to various district entrances; decorative - organization of a small event in small recreation areas. The width of the avenues depends on their functional task, the intensity of the pedestrian flow and from 0.75 to 3.5 m. varies up to [1].

The transfer of green crops to the main avenues, according to the rule, is designed in the style of regularity. Greening of the main and secondary avenues can be done in a regular, mixed and free style.

Avenues designed for episodic (event, event) movement are designed in a more landscape style.

The trunks of the trees used for boulevards should be smooth, straight and have a straight crown. If the length of the main avenue is 200 m, on a flat layer, trees will be planted both ways (linden, maple, maple, chestnut, poplar and other trees). If the length of the avenue is 300-600 m and it is often crossed by secondary roads, it should always be emphasized that the areas of the same row are weakened. Along wide main avenues, trees with various leaves should be planted (oak, linden, lance-leaf maple, horse chestnut). The main and secondary avenues can be decorated with thin-leaved trees (pyramid poplar, western camel tree) [3,4].

It is possible to recommend the kenkos method in the alleys: directly covering the roads (deeply) and passing many rows of trees in a square or checkerboard pattern. This method allows you to create a continuous shadow on the avenue without reducing the passage areas.

Living walls. 2.3 and more rows of bushes are created, as well as many planted trees. They can be low, (0.5-0.8 m), medium (1-2 m) and tall (higher than 2 m.), a border with a living wall up to 50 cm high (border) is called.

A massif of small trees, bordered on all sides by living walls, is called a bosket. It can be used to create various district avenues. Inside the basket, you can create a "green interior" that protects you from wind and sun.

Shrubs in the form of various geometric figures, trimmed like the image of animals, can be recommended for recreational (sports, walking, entertainment) areas, and different districts can make a significant difference to the environment being designed.

The best plants for cutting are:

Deciduous trees - small-leaved linden, Ginnal maple, Tatar maple, small-leaved alder, common pear, forest apple (wild apple), various types of willow, poplar;

Leafy (leafy) shrubs - glossy irgay (Kyzliknik blestyashchi), Thunberg zirk, ordinary zirk, hawthorns, shrub caragana, tree caragana, bodrezak leafy bubble fruiting (puzyreplodnik kalinolistnyy), spireas, simple biryuchina;

Coniferous trees and shrubs - western camellia, spiny spruce, common spruce, European aspen, common spruce, Kazakh spruce.

Woody plants suitable for shaping:

8-12 m. green walls - poplars, common larch, white willow, small-leaved linden, common spruce, prickly spruce, western camellia;

1.5-2.5 m. High hornbeams-hawthorns, Ginnal maple, Tatar maple, small-leaved alder, ordinary pear, forest apple;

0.6-1.5 m. high branch walls - glossy irgay, Tunberg zirk, ordinary zirk, bodrezak leafy bubble fruiting;

25-60 cm. height hedges - glossy irgai, Thunberg zirki (varieties), spireas, ordinary birch, bushy caragana, common spruce, Kazakh spruce;

fantasy cuttings - western camellia, common spruce, glossy larch.

Experiments on changing the natural branches of plants have been started by people since the time of decorative gardening. In the course of historical development, two main trends emerged in the field - western and eastern. Agrotechnical methods and tools are basically similar, but the essence is different. If in the West man is the "gold of creation" and the forms created by them show this, then in the Eastern school, people exist in harmony with nature. Their effect consists of imitating natural elements of the landscape (karikomi) and naturalizing crops (nivaki and bonsai). Currently, the European technique is very widespread - this is the raw material for planting, which is offered in nurseries, but the formation in the Eastern technique is also gaining popularity. The most famous example is niwak, or it is often called garden bansai.

Western techniques include the following types of decorative plant formation.

Topiary - shapes created by cutting along a pre-selected contour. They, in turn, can be divided into groups according to their appearance.

Simple geometric shapes are sphere, cube cone, cylinder, pyramid, living wall elements, etc. Layered figures usually have a clear axial structure and several layers (double-layered pyramid, flanges on axis, spheres on axis, etc.).

Asymmetric figures - spirals and green figurines.

There are also many examples of original oriental techniques.

Niwaki (from Japanese - "tree in the garden"; "niva" - garden, "ki" - tree) - plants grown in the soil, very similar to bonsai according to the style of shaping (so see them often called "garden bonsai"). The main difference: bonsai is a separate composition in itself, and niwaks are an integral element of the garden.

Karikomi - shapes created by cutting. In this group, it is possible to distinguish: okaricoms - shaped plants combined into one composition, they often symbolize natural power (clouds, solidified violent flow (lava), rushing wave);

Kokarikomi is the cutting of isolated trees in the form of objects that attract attention (scattering stones, islands in the sea, high steep cliffs, etc.).

The principles of the formation of plant groups in the Termiz region:

Ecological principle. Each plant form reflects the influence of the geographical and climatic conditions in which this species was formed. That is why the plants are well adapted to their natural growth place and are in harmony with this place. The incompatibility of germination conditions with the requirements of plant development is reflected in their appearance. They dramatically change the shape of branches, the size and color of leaves, the number of flowers, their color intensity and other qualities.

Phytocenotic principle. Phytocenology is the study of cooperative germination of plants. Phytocenosis or plant family is a set of plants growing together, characterized by a certain composition and interaction.

Semantic principle. Trees and shrubs belonging to the same species have a lot in common in the form of branches, the nature of branching, the shape of the stem, the texture and color of the bark.

Physiognomic principle. This principle is based on the harmonious combination of appearance, shape, texture and color of the plants included in a certain composition, as a result of which the whole composition is characterized by aesthetic unity [2].

The following must be taken into account when forming landscape compositions consisting of plants:

- they select and group the main types of trees in accordance with their height, texture and ecological requirements;
- deciduous trees and shrubs are used as companions to evergreens to show seasonal changes in color;
- the selected trees should correspond to the size and scale of the compositions;
- when placed one by one, the branches of one tree should not spread into the sphere of influence of the branches of another tree;
- it is necessary to know when a tree enters its full development period, its durability, and adjust the life expectancy of trees that are part of a certain composition;
- it is not possible to use many types of trees in one grouping. A group consisting of one or two species looks quite impressive (law of simplicity);
- in the composition, one type should dominate, the rest should be subordinate (the law of dominance);
- the trees included in the composition should be compatible with each other and have similar aspects in terms of color, shape, and texture (law of harmony);
- the places allocated for plants should be in accordance with their ecological requirements, and different types of plants participating in the composition should not enter into antagonistic relations.

Ecological importance of green crops. The most favorable conditions of the air environment for humans are clean zoned air with a temperature of 20-250C and a relative humidity of 40-60%. But it is precisely in cities that the air is more prone to the effects of urbanization: it is polluted by dust, gases from motor vehicles, and industrial waste. The high consumption of oxygen by industry and transport in cities destroys the optimal, optimal composition of the air and raises its temperature [5,6].

The heat-intensive "clothing" of the urban environment (asphalt, reinforced concrete, brick, granite, marble) plays a leading role in forming the microclimate in summer. This is due to a very high level of solar radiation. It is known that the radiation temperature of the open dry surface of soil, sand, asphalt, concrete, roofs and walls of south-west and west-facing buildings can reach 70-800 C at an air temperature of 35-400 C. Heated surfaces continue to radiate heat even after the sun goes down, causing the air to rise in temperature and feel humid.

The effect of green crops on the reduction of radiation temperatures in cities is very large: even in the shade of a single tree, the radiation temperature decreases by 350 C, and in a massif of green areas by 400 C.

Use of protective functions of plants in the formation of Termiz city environment. The air temperature under green crops differs from the air temperature in the open space by less than the radiation temperature - 2-3.50 C, but in large massifs it is 160C. can reach The best protection against overheating is provided by dense, tall, horizontally connected high-stem crops, which are exposed to the breeze from below, shaded by asphalt and building walls. During the dry season, air humidity between crops is 4-7% higher than in the open.

Green crops reduce the speed of wind passing through them by 3 times. 50 m. The effect of a wide green row on reducing wind speed is similar to that of an upwind row. This is important in regions with strong winds [7].

The air of the settlements of the city is characterized by high dust in summer, which is caused by the physical properties of the yellow sandy soil, as well as the infiltration of dust in dry hot winds (harmsel) from the deserts surrounding the oases. The growth and concentration of production, rapid automobileization increase the content of gases and toxic fumes in the air far beyond the permissible standards. Perfect landscaping ensures almost complete cleaning of the air from dust, reducing their saturation with harmful microflora by 40-45% due to released phytoncides. In this regard, pine, camellia, juniper, oak, poplar are especially active.

Conclusion. The most favorable conditions of the air environment for humans are 20-250C and 40-60% relative humidity. But it is precisely in cities that the air is more prone to the effects of urbanization: it is polluted by dust, gases from motor vehicles, and industrial waste. The high consumption of oxygen by industry and transport in cities destroys the optimal, optimal composition of the air and raises its temperature.

The only means of air conditioning (conditioning) are green crops, one hectare of which releases enough oxygen for 200 people to breathe. At the same time, they absorb up to 8 kg of carbohydrates per hour. In other words, 50m per person. Greenery ensures that the optimal composition of the air is maintained in cities.

The effectiveness of green crops as air sanitation is ensured only by proper engineering and ecological-biological construction. When creating sanitary green crops, it is necessary to take into account the wind regime, the nature of waste released into the atmosphere, and their physical and chemical composition. In close connection with these factors, the structure, width, height and variety composition of crops are determined.

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