Bioecological characteristics of Sophora Japonica.

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Abstract: In this article, the bioecological characteristics of the acclimatized ornamental tree Japanese saphora, including the vegetation period of Japanese saphora, its resistance to any soil conditions, are mainly recommended as an ornamental tree, and its useful properties in medicine and folk medicine are highlighted.

Key words: ovary, legume, ichota, rutin, flavonoid, acclimatized tree, vegetation, budding.

Uzbek name – Yapon saforasi (Tuhumak).

English name -Sophora Japonica L.

Latin name -Styphnolobium Japonicum

Russian name -Safora Yaponskaya

Sophora Japonica belongs to the legume family Fabaceae. It is a large tree up to 25 meters tall. The young branches are hairy and covered with greenish-yellow bark. 5-7 pairs) oblong ellipsoid, oblong ovate or pointed, length 23-53mm, width 11-21mm. Flowers are yellow butterfly-shaped, forming a tube-shaped inflorescence. It forms a flower. The 5-toothed stamens of the calyx are not united. The fruit is a 3-8 cm long, fleshy, short-banded rhizoidal pod that does not open when ripe. It blooms in June-July. It ripens in August-September.

It is a very beautiful tree, 10-20 m tall, with spreading branches. The bark is fissured and dark in color at an older age, the bark of the branches and twigs is smooth and dark green, with lenticels. The leaves are arranged alternately, have an odd feather-like structure, and consist of 7-17 egg-shaped leaves.

Sophora blooms from June to August, the flowers are white and yellow, butterfly-shaped

and forms a shingle hole at the end of its branch. It produces nectar

plant. The pods are made in October, they hang on the tree, look, the surface is rough,

cannot be divided into phases. It is filled with a sticky liquid, which is green at first and then dark red in color. The seed is black and looks like a bean. If it is sown in spring, it will germinate after 10-15 days. The axis and lateral roots develop vigorously and turn blue from the tip. The tree contains a poisonous substance, but animals are not harmed by it.[1,2,3,4,5]

Among the leguminous family, there are representatives of trees and shrubs, the leaves of which are oval, elliptic, egg-shaped. In tree representatives, the leaves are often arranged alternately.

Sophora Japonicais also recognized as a poisonous plant. Sophora Japonica is an ornamental street tree that is resistant to air pollution, drought and extreme heat. It can also grow in sandy areas. High salt content. It can also grow in wet, salty soils. It is resistant to strong winds and severe cold.

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It was cultivated in Japan and China in 1747. In Crimea, it began to be cultivated in the botanical garden since 1814. It has spread widely in the Crimea and Krosnadar region. The flowers are cream-colored. ,flowing and fragrant, collected in a pea-like pod. From the point of view of the morphological structure, the flowers belong to the group of curved flowers and are bisexual.[6,7,8,9,10]

It blooms in July-August. Its flowers are 35 cm long. It blooms twice a year. The fruit has a yellow or yellowish-brown skin. The fruit is juicy, rich in juice, and has a cylinder-like shape. The fruit ripens in September-October. The fruit is a pod. Fruits can remain on the branches of the tree throughout the winter. Sophora Japonica is up to 25 meters tall, with spreading branches. The old stem is dark gray with long cracks. Young branches are green without thorns. ladi The leaves are 11-25 cm long, 2-5 cm long, 9-17 ovate-shaped leaves. The genus Safora includes about 45 species of small trees and shrubs. These species are native to South-Eastern Europe, South Asia, Distributed in Australia, Pacific Islands, Florida, Puerto Rico, Southeast America and Central Asia.

Most of them are used to create ornamental gardens. There are 2 types of sophora in the flora of Central Asia. Not a single species can be found in the wild in the flora of Uzbekistan. But Japanese saffron (Sophora Japonica) is cultivated in our region.[11,12,13,14,15]

Sofora wood is hearty and hard. Yellow dye is obtained from its fruit. This tree grows naturally in Japan and China. It was brought to the CIS 150 years ago. It is affected by cold, so it is planted in the southern regions of Ukraine, Crimea and the Caucasus. It is a light-loving plant, it is not picky about the soil, it grows even in wet soil, it is resistant to drought. Sofora is one of the most beautiful trees. Because it blooms beautifully. It is important to plant it on slopes to protect the soil from being washed away by rain. It is recommended to use widely in landscaping works.

It is native to China and Japan. In the south of the European part of Ukraine and Russia, it is widely grown as an ornamental tree in parks, streets, along canals, in Transcaucasia, Central Asian Republics, and in the south of Kazakhstan. It was brought to Uzbekistan for the first time in the middle of the 18th century.

Today, Sophora Japonicais grown on a large scale in the territory of Uzbekistan. In order to obtain the main raw material, Sophora Japonicais planted in special areas, and flowers of Japanese safflower, rich in rutin, are prepared from them for the preparation of medicinal preparations. Sophora Japonicais among the medicinal trees and is widely used in pharmaceuticals and medicine. Its buds and flowers contain a lot of rutin. This substance can be used to treat and prevent many diseases such as vitamin P deficiency and retinal hemorrhages. It is used in the preparation of rare medicines. Also, medicines made from its flowers and fruits are used for radiation, rheumatism, many types of heart diseases, hypertension, angina pectoris, atherosclerosis, heart attack, stroke, stomach and intestinal system colitis, gastritis, liver, skin diseases. It is curative in the treatment of infectious diseases such as allergic diseases, mumps, measles, rubella typhus.

In the climate of Ferghana, the fruits of Sophora Japonica are green when unripe and red when ripe. In the third part of the fruits, the small growths left by the fathers and at the same time the mother's beak are preserved for a certain time. The height of Sophora Japonica can grow from 10 to 25 meters.

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Sophora Japonica is planted in gardens and avenues for its beautiful branches and flowers. Sophora Japonica is a plant that does not require a special environment and can live in any conditions. Sophora secretes sap from itself, that's why it is also called a honey tree. Sophora Japonica growing in the territory of Fergana State University repeats the characteristics of the leguminous (Fabaceae) family during its development. This species is cultivated only in culture, and only Sophora Japonica species is acclimatized in Fergana city.

Sophora Japonicais an acclimatized introduced ornamental tree. Sophora Japonicacan adapt to different climatic conditions. Among them, Sophora Japonicais a valuable, long-lasting tree that can grow well in the territory of Uzbekistan. As an ornamental tree, it can be found in urban streets, parks, canals and ditches of Uzbekistan. are grown in the A tree that grows up to 20 meters tall. The leaves are complex with odd feathers and are arranged in a row with a short band on the branches. The leaves are sharp-pointed, oblong-ellipsoid, oblong-ovate or broad lanceolate. The flowers are yellow, pink. It forms a cluster of waxy flowers. The fruit is a fleshy, short-branched, rose-shaped pod. It blooms in June-July, and the fruit ripens in August-September. The fruit, flower, and sometimes the leaf are collected. When the fruit is ripe, it is collected and dried in the open air. The collected flowers and leaves are dried on the ground.23,24,25]

Eggplant fruit contains flavonoids (rutin), vitamin B, C, dyes and other substances, and its flower and leaf contain a large amount of rutin. .It acts like vitamin P and is used in the prevention and treatment of diseases caused by impaired permeability and fragility of blood vessels. A decoction made from its fruit is used to treat purulent wounds and burns. There are several large and old representatives of the Sophora Japonicain the territory of Fergana city. Information was obtained on reproduction methods: reproduction by seeds, propagation by vegetative method through root shoots. The agrotechnics of growing safflower seedlings were studied.

In the course of studying the biology of Japanese sago, we realized how valuable a medicinal tree it is. Medicinal substances contained in all generative organs (flowers, fruits, seeds) of Japanese sago can cure all kinds of diseases.[20,21,22]

The flowers, fruits and seeds contain flavonoids, glycosides, flavoring substances, organic acids, ascorbic acid. The most important of these is rutin contained in the flowers. applying it to pharmaceuticals on a large scale, it makes it possible to use it in practice. Sophora Japonicacan also be used in industry. Including its stem, it is used in furniture making and parquet preparation. Sophora Japonicahas a number of practical values. It can be used in medicine, pharmaceuticals, woodworking industry. It is a uniquely beautiful tree.

The development of plants is carried out as a result of the influence of external environmental factors and the processes taking place in their own organism. In order to fully understand the laws of plant development, it is necessary to simultaneously study the periodic processes of both the plant itself and the environment in which it lives. In order to carry out observations of this nature, it is necessary to carry out complex work in various fields at the same time. The task of phenology is not only to record the passage of plant phenophases, but also to study the effects of changes in the rhythm of natural phenomena.[16,17]

When the Sophora Japonica L plant was observed in Ferghana climatic conditions, the beginning of its vegetation during the observed four years gave almost the same result. This process

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depends on how the winter rest period goes. If the winter is dry and cold, it will have a negative effect on Sophora Japonica L. Damp cold has a bad effect on any plant. This conclusion comes from observations.

All observations gave almost the same result. Sophora Japonica, in addition to the beauty of the nature of Fergana State University, has a special place in the biocenosis of plants. .The lower extra branches are removed, and the upward branches remain. safflower is a drought-resistant plant, it should be said that in the summer months, even in the heat of 35-40 degrees, it is possible to show the species that carried out their vegetation normally due to rain. Because Fergana The valley lands are made up of gray soil. Since gray soil is rich in minerals, it supplies the nutrients necessary for plant life through the pipes to the plant. delivers.

Among other decorative plants, the Sophora Japonica also produced early flowers. However, in the second half of May, it was possible to see that the buds appeared on the ends of the branches of the Japanese safflower. According to the observation results of almost the previous 3 years, since the budding process coincides with the beginning and middle of June, it can be concluded that the air temperature affects all physiological processes in plants.

Sophora Japonicais a valuable decorative and hedge tree that can be widely recommended for strengthening shifting sands, establishing green hedgerows in fertile areas, rocky and infertile soils.[18,19,20]

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