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IMPORTANCE OF SOAP TREE (KELREITERIA PANICULATA) PLANT IN CULTIVATION AND GREENING IN THE CONDITIONS OF NAMANGAN REGION

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Abstract:

Soap tree - this Asia and America in the tropics growing sapinda of the family leafy small trees or bushes. Soap of the tree fruits, soap nuts , diameter about 1 , 5 see which was fruits as they are suddenly up to 3 seeds own into takes Soapy berries when ripe, their surface soft and velvet case will be. When cooked, it hardens, nut shell like, therefore for name – "soap nuts". Dry soap nuts have a dark brown or black color depending on the type of drying.

Keywords: Soap tree, walnut, seed,

INTRODUCTION. Soapwood is an evergreen or deciduous small tree or shrub of the sapinda family that grows in the tropics of Asia and America.
The name "Sapindus" was given to the plant by C. Linnaeus and comes from Latin "sapo" - "soap" and "indus" - "Indian", that is, "Indian soap".

The fruits of the soap tree, soap nuts, are fruits about 1.5 cm in diameter that contain one to three seeds. When soap berries are ripe, their surface is soft and velvety. When ripe, it hardens, like a nut shell, hence the name - "soap nuts". Dry soap nuts are dark brown or black depending on the type of drying.

Soapwood grows in countries with a warm climate, but northern India is the main area of its location. Sapindus is a tree with 5-10 pairs of leaves, somewhat reminiscent of our mountain flower. The tree can grow up to 25 meters tall and has beautiful green-white flowers. After that, beautiful fruits appear, similar to nuts in the shell. Then they are used instead of soap and shampoo, because they contain 40 percent of saponin. It is this substance that actively removes dirt from any fabric and surface.

Trees grow up to 10 meters tall, with smooth light gray bark. The leaves are hairy, up to 30 cm long and 15 cm wide. Each feather leaf consists of 5-9 leaves of elongated lanceolate shape with smooth edges. The upper part of the leaf is shiny, and the lower part is covered with small hairs. It begins to bear fruit only in the 10th year of life, and these wonderful trees live up to 100 years. Soapwood is used in shipbuilding.

It blooms in September, the flower is white, the leaves are small, up to 3 mm long. The fruit is a drupe, spherical in shape, up to 2 cm in diameter, glabrous and shiny. Inside the drupe there is a black spherical seed, from which oil is squeezed and buttons and various ornaments are made. Fruits ripen in spring. One tree gives 30-100 kg of dried fruit per year. The drupe is soft at first, and when ripe it becomes hard, like a nut, so the fruits are called soap nuts.

Soapwood – sapindus's mukoros has larger nuts, so it is in high demand.

- Sapindus species Kelreyteria paniculata is grown in Asia, the Caucasus regions, and especially in our region. Currently, in our climatic conditions, the type of soap tree Kelreiteria paniculata is mainly planted. This tree is called soap tree in the local language, and its Latin name is *Kelreiteria paniculata.* The natural distribution of the soap tree is from China and Japan to India. It is also well grown in the USA and North Africa. Its seeds grow very easily. Before planting, soap tree seeds are soaked for a day and it is recommended to plant them at a depth of 2-3 cm. This tree begins to bear fruit in about 5-7 years. The tree is adapted for cultivation in the central and southern regions of Russia. Its soap balls are a real find in everyday life. It is known that synthetic detergents pose a certain risk when washing things and dishes, because they contain harmful substances. The soap nuts of this tree perfectly replace the washing powder and also provide a detergent. You can get completely natural soap from this tree. Therefore, in order to reduce the effect of chemicals and prevent allergic skin diseases, soaps obtained from this tree are considered a natural product. In a word, a real, modern ecological detergent is obtained. In addition, the laundry is well washed and soft with the help of

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this tool. Fabrics washed with such soap will never lose their quality and give a pleasant impression. There are organic compounds - saponins (glycosides). These are natural shock absorbers. Saponins completely decompose in the environment and, unlike soaps, do not create an alkaline reaction. Soap nuts wash clothes perfectly in a washing machine or hand wash. Examples include washing dishes, cleaning gold and silver jewelry, cleaning the house, and washing cars. It repels mosquitoes and flies and soap emulsion is used as a fertilizer for house plants. Detergents obtained from fruits are useful in every way, they keep the color of fabrics in their condition, they are easy to use, multifunctional, economical, reusable. In order for the saponins to be extracted from the nut as much as possible, the shell of the nut is crushed.

THE TECHNOLOGY OF GROWING A SOAP TREE IN NATURAL CONDITIONS

Currently, the soap tree is adapted to the climatic conditions of our country, especially in Namangan, and breeding works are being carried out. "Namangan yol kokalam" unitary enterprise of ornamental plants has been allocated 16 hectares of land in Namuna area of Kosonsoy district. More than 40 ornamental trees and shrubs are planted and propagated. In particular, a type of soap tree has been planted from seeds since 2019. The climatic conditions for Kelreyteria paniculata should be warm. Because this tree is heat-loving. It is scattered on the fields and planted. The soil to be planted should contain humus and organic fertilizers. After the seeds are planted, the seeds are covered with soil and small stones removed from the rake. By February-March, they will begin to germinate. Young Seedlings are transplanted to large areas depending on their condition. After transplanting, watering should be done 8-10 times a year if the water is good, if there is an area, it will be enough 3-4 times. In Kosonsoy, this tree is watered up to 10 times. The temperature norm for this tree is 25-38 ^{0} C. In this nursery, the soap tree is a normal condition it grows up to 1-1.5 meters in 1 year. The density of the planted soil is 30. Basically, this nursery reproduces, grows and supplies ornamental trees.

Cultivated soap trees are mainly used for roadsides and composition methods. The purpose of planting on roadsides is to protect residents from dust and city noise.

"Namangan yol kokalam" UK Agrochemical Research Center "Namangan yol kokalam" area "Tuyatoydi" district "Namangan" Kosonsoy district Namangan region experimental land area - 16 hectares.

Area of irrigated land - 16 hectares Description of irrigated land:

The mechanical composition of medium cultivated pale gray soil irrigated from beginning: light sand without structure upper layer, the upper part of the capital leveled land was cut 20 years ago, the slope level is 5-10 ^{0} C from the north-east to the south-east.

The type of salinity is sulfate-chlorine-mixed type, moderate and strong in terms of sulfate, unsalinated and weakly saline in terms of chlorine.

The depth of settling of syzot waters is less than 10.0 m. The depth of rocks is less than -2-2.5. The area of 16 hectares (5.0 mg/kg) with mobile phosphorus is very poorly supplied. With exchangeable potassium, 16.0 ha (60-100 mg/kg) area is very poorly supplied. The driving layer with humus (humus) is very poorly supplied by 16.0 ha (0.75-0.41 %).

The series of negative effects of water-soluble harmful salts on plants or trees:

1. Chlorides: NaCl, $MgCl_2$, $CaCl_2$
2. Sulfates: Na_2SO_4, $MgSO_4$
3. Carbonates: Na_2SO_2, $NaHCO_3$

Factors affecting soil salinity and geographic distribution:

1. Climate
2. Geological structure
3. Geographical conditions
4. Hydrogeological conditions
5. Land use

According to the data of foreign and domestic researchers, the level of mineralization in salt washing and water can be 2-5 g/l, but irrigation and salt washing with water with a mineralization level of more than 5 g/l is possible. For the normal development and growth of trees, the amount of dry residue of the soil in the Fergana valley should be 0.40-0.75%, Cl 0.05-0.08%, SO_4 0.2-0.9% For trees, during the growing season , seed germination in a layer of 20 cm and dry residue in the first growing season of trees 0.75-1%, Cl -0.008-0.01%, SO_4 0.9-0.5% of the vegetation and in the second period, dry residue should be 1-1.3%, Cl-0.01-0.02%, SO_4 -0.5-0.65%.

Great attention should be paid to the depth of ground water during salt washing. According to the recommendation of A.E.Nerozin, the depth of groundwater is 1970 m^3/ha at 2 m, 2510-2810 m^3/ha at 2.5 m, 3520-3990 m^3/ha at 3 m, 3.5 m It is 4720-5210 m^3/ha. That is, as the ground water deepens, the washing rate increases. When washing the soil salt,

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first of all, pay attention to its mechanical composition and the washing rate is determined based on this. 1800 m^3/ha in the first washing of sandy soils, 2000 m^3/ha of medium sandy soil, 2200-2300 m^3/ha of heavy sandy soil, first chlorides, sulfate, sodium, magnesium, then gypsum, hydrocarbonate and carbonates are washed away. The soil of my studied area is strongly saline in terms of sulfate and weakly saline in terms of chlorine. The amount of salts is mainly sulfates 96.3%, bicarbonates 2.7%, chlorides 1% is The allocated area is very poorly supplied with nutrients, i.e., humus, humus, mobile phosphorus, exchangeable potassium that can be absorbed by plants and trees. Therefore, before planting seedlings, organic and mineral fertilizers must be applied with agromelioration measures. A dog should be given.

I followed the soap tree from planting to seed, germination, hanging and development in the nursery in Kosonsoy.

In 2021, the total amount of seeds collected from the soap tree planted on an area of 250 m2 was 10 kg. The total number of trees released to public highways and other organizations in the spring season was 10,815, of which 359 were soap trees. 24,078 saplings of which 905 are soap trees were released from the nursery of landscape plants in the autumn season.

It can be seen from this that the importance of a single soap tree is significant. As of 2022, the number of saplings and saplings in this nursery is as follows: the number of 1-year-old soap tree saplings is 1,390, and the number of 2-year-old saplings is 1,051. In the spring season, the number of saplings planted from the nursery to the education department and the number of soap tree seedlings purchased is 13,300 pieces.

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