

METHODS FOR VEGETATIVE REPRODUCTION OF SOME BEAUTIFUL TREES AND SHRUBS

Jalolov Komiljon Baxromovich

Andijan Agriculture and Institute of Agrotechnologies

3 Stage Base Doctoral Student.

E-mail: komiljon.jalolov.1987@gmail.com

Tel: 90-170-06-33

To'ychiev Xikmatullo Yuldashalievich

Director of Andijonyolkokalam Unitary Enterprise

Abstract

In the article *Chitalpa tashkentensis* T.S. Elias & Wisura, *Melia azedarach* L., and *Rhus coriaria* L., methods of reproduction from vegetative organs have been researched. Also, the methods of reproduction of plants, planting periods, the height of annual branches, the diameter of the root neck, swelling, the preservation of seedlings, and the importance of using seedlings in landscaping were discussed.

Key words: *Chitalpa tashkentensis* T.S. Elias & Wisura, *Melia azedarach* L., and *Rhus coriaria* L, vegetative organ, shoot shoot, root bud, phenophase, shoot growth dynamics.

СПОСОБЫ ВЕГЕТАТИВНОГО РАЗМНОЖЕНИЯ НЕКОТОРЫХ КРАСИВЫХ ДЕРЕВЬЕВ И КУСТАРОВ

Аннотация

В статье *Chitalpa tashkentensis* T.C. Elias & Wisura, *Melia azedarach* L., и *Rhus coriaria* L., были исследованы способы размножения из вегетативных органов. Также обсуждались способы размножения растений, сроки посадки, высота однолетних ветвей, диаметр корневой шейки, набухание, сохранение саженцев, важность использования саженцев в озеленении.

Ключевые слова - *Chitalpa tashkentensis* T.C. Elias & Wisura, *Melia azedarach* L. и *Rhus coriaria* L, вегетативный орган, побег, корневая почка, фенофаза, динамика роста побега.

Introduction

"Decision PQ-3262" on measures to improve the system of greening and architectural and landscaping of highways "outlined the task of" self-improvement " UK to establish specialized decorative plant nurseries for the cultivation of ornamental plant seedlings, selection work and adaptation to local climatic conditions[1].

In the field of dendrology, it is important to introduce and acclimatize ornamental trees and shrubs, research methods of reproduction, growing seedlings in local conditions.

For this reason, the method of using vegetative organs in the reproduction of plants of some khushmanzara trees and shrubs is effective.

Analysis of Thematic Literature

Flowering plants usually reproduce from their seeds, as well as from their vegetative organs. Some plants reproduce by disassembling body organs. This uses a branch pencil, a leaf, a rhizome and a root ball.

For example, in trees such as Poplar, Acacia, shoots are formed from each piece of Root accidentally cut, and it is called Root bachki [11]. This means that several branches are formed from one piece of Root.

Chitalpa tashkentensis T.S. Elias & Wisura, a high-ornamental, low-growing tree, it is a hybrid created in 1964 by cross-breeding species such as *Chilopsis lionaris* and *Catalpa bignoides* [8]. The hybrid is sterile and does not form seeds.

This hybrid tree species is mainly propagated from branch cuttings.

Researcher Sh. When treated with the drug kornevin, Kholova determines that the rooting indicators from a half-timbered and wooden pen are 71% and 73%, respectively [10]. The root-forming nature of the cuttings may depend on plant morphobiology and soil-climate factors.

Melia azedarach L., A tree in the family meliaceae. Naturally, it is widespread in South Asia and Australia. Russian scientist G.N. In shlikov's treatise "introduction I acclimatization rasteniy", two types of *Melia* from the mountainous regions of northern India – *M. azadirachta* L. and *M. azedarach* L. Writes that it is introduced into the Central Asian region. Trees height 15-18 m. ni it claims to be established and has a very good scenic view [12].

M. the azedarax plant is used as an ornamental tree in landscaping. Leaves, flowers and crowns look beautiful. Of particular importance with good reproduction from seeds and rapid growth of the body [3].

Rhus coriaria L., The ascending totim or ascending sumax, is a tree in the family pistadochios (Anacardaceae). In the "Atlas of plants" teaching manual, Oshlagış Sumah is defined as such. "Tree height 3-7 meters. The leaves are complex patchy, 9-27 pairs of petals, 45 cm long. The mound is pyramidal-Row, 8 cm long and 4 cm wide. Flowers are green, blue. The petals are round-triangular, the petals are nontrivial or inverted nontrivial. It is double-flowered. One or two-sex. Grown as an ornamental plant [7]. The growing totim is considered one of the types of trees included in the "Red Book" of Uzbekistan.

I of Uzbek scholars. V. Belolipov describes that 17 species and 2 forms of totim are grown in the Tashkent Botanical Garden. In his research, he researches methods of propagation from the seed of totim's plant. In the course of his research, totim found

that the germination of seeds is 2-8%. The reason claims that about 90% of the seeds are puch[2].

In the studied literature, there were no reports of studies on reproduction from the vegetative organs of totim.

Materiallar va uslublar

Experiments Andijan region “Andijonyo’lko’kalam” Unitary Enterprise the cultivation of ornamental plants was carried out in the pitomnig, located in the free massif of the Pakhtaabad district. The climate of the experimental area is sharply continental. Summers are hot and winters are cold. The soil is loose soil with a light tint.

During our scientific research Chitalpa tashkentensis T.S. Elias & Wisura, Melia azedarach L., va Rhus coriaria L., research on reproduction of plants from vegetative organs was studied during 2020-2022

Studies on reproduction from vegetative organs X.T.Gartman, D.E.Caster, M.T.Tarasenko [4,9] and Ph.M.It was studied using methods developed by Browse [6]. The data obtained is D.A.It was processed using the statistical method of dospekhov [5]. The following experiments were carried out in the development of methods of reproduction from vegetative organs.

- from the annual branches, in the first ten days of November, a pencil was prepared and buried in the ground. Kept in the hedges until early spring and planted in the first decade of March;

- root bunches were dug up in early spring, cut to a length of 8-10 CM and planted in the soil; in the experimental field, a nursery was erected on a 60x15 CM scheme of trees;

- Samples from experimental objects were prepared from 400 pens in four returns of 100 pieces each.

Research results and their discussion

The method of propagation of ornamental trees and shrubs from a wooden branch cuttings does not have the same effect on all plants. This process is observed in species where the characteristics of intraducent reproduction have not been fully studied.

In our studies, the root formation period of the Woody branch pencil is Chitalpa Tashkent T.S. Elias & Wisura. on average 21.5 days on the tree, Melia azedarach L. on average 28.5 days on the tree, Rhus coriaria L. on the tree, however, it was observed that the cuttings did not germinate at all. The degree of germination of the cuttings is Chitalpa Tashkent T.S. Elias & Wisura. 89.35% in the tree and 12% in the Melia azedarax tree. The year-round retention rate of seedlings was noted to be 85.2% and 62%, respectively (Table 1).

Table 1 Features of reproduction from a wooden branch pencil

Plant species	n	Root formation period, day			Bruising, %	Conservation of seedlings, %
		$\bar{X} \pm S \bar{X}$	Lim	V %		
Chitalpa tashkentensis T. S. Elias va Visura.	100	21,5±0,3	18-24	2,161	89,3	85,2
Melia azedarach L.	40	28,5±0,4	23-31	1,405	12	62
Rhus coriaria L.	100	-	-	-	-	-

After the seedlings of trees and shrubs are dug up, several root bunches are formed from the roots, which are cut in the soil. This feature has an economic acuity in nursery farms. In the experiment Chitalpa Tashkent T.S. Elias & Wisura. that the tree does not reproduce from the root part, Melia azedarach L. the period of root formation of the tree is 32.8 days, Rhus coriaria L. in the tree, it was found to be 30.2 days. Bruise Melia azedarach L. 41.75% of the tree and 93% of the seedling preservation rate

Picture 1. Chitalpa Tashkent T.S. The annual seedlings of Elias & Wisura tree, developed from a branch Pencil, are a process of measuring the diameter of the stem root collar.

founded by Rhus coriaria L. the tree was found to be 96.4% and 100% respectively (Table 2). Rhus coriaria L. it was noted that it is most effective to propagate the tree through the root fork.

2-Table. Features of propagating plants from root bachki

Plant species	n	Ildiz hosil qilish davri, kun			Bruising,, %	Conservation of seedlings,%
		$\bar{X} \pm S \bar{X}$	Lim	V %		
Chitalpa tashkentensis T.S. Elias & Wisura.	100	-	-	-	-	-
Melia azedarach L.	100	32,8±0,4	29-37	1,275	41,75	93
Rhus coriaria L.	100	30,2±0,8	26-38	2,512	96,4	100

An indicator of the length of the height of the annual branch is Chitalpa Tashkent T.S. Elias & Wisura. the average size of a tree in seedlings propagated from a branch cuttings is 182 cm. ni, Rhus coriaria L. 49.4 CM in tree seedlings. ni, Melia Azedarach L. seedlings propagated from the branch and root of the tree are 41.3 CM in height and 30.5 cm in length. founded ni. During the experiments, Chitalpa Tashkent T.S. Elias & Wisura. it was observed that the rapid growth of the annual seedlings of the tree was significantly different from others (Table 3).

3-Table Indicators of the length of the annual branch height

Proliferating vegetative organ	Plant species	n	Stem height, cm		
			$\bar{x} \pm S \bar{x}$	Lim	V %
Rod pencil	Chitalpa tashkentensis T.S. Elias & Wisura	100	182±5,343	145-220	2,936
	Melia azedarach L.	40	30,5±0,8	28-41	2,735
Roostbachki	Melia azedarach L.	40	41,3±0,6	36-47	1,257
	Rhus coriaria L.	40	49,4±0,5	43-54	1,04

Indicators of the diameter of the root throat of the annual branch Chitalpa Tashkent T.S. Elias & Wisura. 1.8 cm on the tree., Rhus coriaria L. at 1,0 CM., Melia azedarach L. on the tree, however, it was noted that it was 0.5-0.6 cm (Table 4).

4-Table Indicators of the diameter of the root collar of the annual branch

Proliferating vegetative organ	Plant species	n	Root throat diameter, CM		
			$\bar{x} \pm S \bar{x}$	Lim	V %
Rod pencil	Chitalpa tashkentensis T.S. Elias & Wisura.	100	1,8±0,08	1,3-2,3	4,509
	Melia azedarach L.	40	0,6±0,02	0,4-0,8	3,228
Roostbachki	Melia azedarach L.	40	0,5±0,01	0,4-0,7	2,864
	Rhus coriaria L.	40	1,0±0,02	0,7-1,1	2,255

Vegetatively grown seedlings O'zDSt 322.15.04.2009 (ГОСТ 26869–86) «Саженьцы декоративных кустарников» assessed by state standard requirements. According to him, the height of seedlings at the age of 1-2 years is on average 30-40 cm., the root collar is 2.5-4 mm in diameter. is shown to be.

Conclusions

When propagated vegetatively Chitalpa Tashkent T.S. Elias & Wisura. the tree is mainly made of branch cuttings, Melia azedarach L. from the tree branch pencil and root bachki, Rhus coriaria L. the tree, however, has only been found to propagate from root-bachki.

Seedlings grown vegetatively are recommended to be planted and cared for in a 60x60 scheme on field areas from the second year.

Chitalpa Tashkent T.S. Seedlings of the Elias & Wisura tree showed that from the second year it was possible to plant highways and settlements for landscaping.

References

1. O'zbekiston Respublikasi Prezidentining qarori, 11.09.2017 yildagi PQ-3262 son.
2. Белолипов И.В. Дикорастущие и вводимые в культуру растения Узбекистана. Сборник. Семенное размножение сумахов в ботаническом саду АН УзССР. Изд-во "Фан". Т. 1966. С-76
3. Ввездский А.И. и др-е. Флора Узбекистана. Кн. 4, Т., Изд-во АН УзССР, 1959. С. 78.
4. Гартман Х.Т., Кестер Д.Е. Размножение садовых растений. – М., Сельхозиздат, 1963. – 471 с.
5. Доспехов Б.А. Методика полевого опыта. - М.: Агропромиздат, 1985. - С. 9-23. А.И.Ввездский и др-е. Флора Узбекистана. Кн. 4, Т., Изд-во АН УзССР, 1959. С. 78
6. Мак-Миллан Броуз Ф. Размножение растений: Пер. с англ. —М.: Мир, 1992. - 192 с., ил.
7. Мўминов М., Топволдиев Т., Тўхтабоев А. Ўзбекистон ўсимликлар атласи. Ўқув қўлланма. Т. -2020 й. 111-112-бетлар.
8. Русанов Ф.Н. Межродовая гибридизация катальпы с хилописом и ее значение для понимания филогении этих растений /Интродукция и акклимизация растений. Вып.№8-Ташкент: Фан, 1971. С - 50-58.
9. Тарасенко М.Т. Новое в практике вегетативного размножения растений//Докл. ТСХА. 1978а. Вып. 53. 60 с.
10. Холова Ш.А. Кўкаламзорлаштириш ва фитодизайнда қўлланиладиган истиқболли ўсимликларнинг биоэкологик хусусиятлари. Қишлоқ хўжалиги фанлари бўйича фалсафа доктори (PhD) диссертацияси автореферати. Т – 2019. 42 бет.
11. Ҳамдамов И ва бошқ. Ботаника асослари: Қ.х ин-ти студ. Учун дарслик. –Т.: Меҳнат, 1990. 82-бет
12. Шлыков Г.Н. Интродукция и акклиматизация растений. М.; Сельхозиздат, 1963, 488 с.