



The Role of Cuttings in Silki Breeding

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ABSTRACT

The article studies the planting of fodder plantings of the bush type, laid by cuttings in a permanent place - very promising. Such plantings are characterized by a short till exploitation period and high leaf yield: in the first year after planting the cuttings, 3-4 tons of leaves are obtained from 1 ha, after two - 12-14 tons

Keywords:

mulberry, plant, species, variety, soil, cuttings, ringing, shoots, mother plantation, fodder plantations, bush plantation, seedlings

Obtaining own-rooted plants from cuttings is of great economic importance. Cuttings are an economical, fast and efficient way of propagating many forms of fruit, technical and ornamental plants, which makes it possible to preserve their valuable traits unchanged and significantly reduce the time and cost of cultivation.

Own-rooted trees are characterized by a powerful root system, high productivity, durability, and resistance to adverse environmental conditions.

When studying the features of cuttings of mulberry in the open field in the soil and climatic conditions of Uzbekistan, we obtained a high percentage of rooting of woody cuttings of its main industrial species and varieties.

Studies have shown that mulberry exhibits a different ability for vegetative propagation by cuttings, depending on the age of plants and cuttings, as well as on which part of the crown and shoot zone they are taken from. Better cuttings are annual shoots; a greater percentage of rooting in cuttings from

the lower and middle zones of the shoot and in young shoots (shoots) located closer to the root system, which is explained by their better water supply and young age.

We have established the optimal formation of mother plants for harvesting cuttings. With the help of annual pruning at the base of the shoots at the soil level, a coppice type of plant is created. Annual shoots of mulberry bushes, feeding on a developed root system, quickly increase the growth in length and width. The coppice type of uterine cuttings preserves the age-related youth of annual shoots. With the correct use of agricultural practices, the growth of shoots, the accumulation of nutrients in the shoots of mother plants, their maturation and lignification are ensured. When mother plants are placed according to the scheme of 0.25 x 0.70, 700 thousand ringed cuttings 30-40 cm long come out per 1 ha. from the start of the growing season. The rooting of woody cuttings is also affected by humidity, aeration and soil temperature.

The parameters of the cuttings indirectly testify to the availability of their reserve nutrients. With an inclined landing, the optimal length of the handle is 15-20 cm, with a horizontal 30-40 cm.

The way you land is very important. In dense soils, the lower end of the cutting should be at a shallower depth than in soft soils with more favorable aeration conditions. The upper layers of the soil warm up more, and the optimum temperature for root formation occurs here earlier than in the lower ones. Horizontal planting to a depth of 5-10 cm with cuttings embedded in soil creates better temperature and air conditions than an inclined planting to a depth of 15-20 cm.

When planting cuttings at an angle, the roots are located on the basal part, and when planted horizontally along the entire length of the cutting, therefore, a more powerful root system develops here and shoots grow more intensively. In the soil and climatic conditions of Central Asia, the root formation of mulberry cuttings is significantly affected by the irrigation regime. The main function of the roots is to supply plants with water, so their neoplasm on the cutting is mainly associated with the water regime.

In dry soil, the cuttings lose their ability to root. To facilitate root formation, the shoots are prepared for cuttings by ringing, and changing their physiological state. Nutrients accumulate above the ring, which contribute to further root formation. Ringed cuttings, better supplied with nutrients, have greater resistance to adverse conditions, a highly developed root system and aerial part, are better preserved and more easily tolerate transportation over long distances (whole shoots in sheaves). The method of propagation of mulberry by ringed cuttings was tested under various agro-climatic conditions in the main sericulture regions of the Uzbek SSR; Tashkent, Syrdarya, Fergana, Namangan, Andijan, Surkhandarya, Bukhara, Samarkand, Jizzakh regions and the KKASSR, as well as at the Russian Republican Research Institute of Sericulture. For all tested varieties and clones of mulberry, a high (70-90%) rooting rate of cuttings was obtained. The ability to propagate also depends on its species and

cultivar; under appropriate conditions, cuttings of any kind and variety of silk can be rooted, but for production purposes it is most rational to use highly productive hybrid varieties. Plants obtained from draft plants are durable. In our experiments, the stem own-rooted mulberry, obtained by cuttings from young hybrid plants, differed in the greatest growth. The age of standard normally fruiting trees from the time of planting is over 25 years (Fig. 1)



Hybrids from own-rooted parent pairs give a high percentage of rooting. Clones of an easily rooting economically valuable hybrid mulberry were obtained by repeated cuttings. The biological features of self-rooted cuttings of mulberry plants - a powerful development in the first years of rooting and inheritance of maternal traits - are the basis for using the method of cuttings to accelerate the creation of a fodder fund for sericulture.

By laying fodder plantations with cuttings of valuable, easy-rooting varieties, it is possible to grow bush mulberry plantations in one or two years, which are homogeneous in terms of the main (whole and large-leaved) economically valuable traits (Fig. 2). By planting woody cuttings, it is possible to accelerate the production of own-root planting material of varietal and hybrid mulberries for laying high-stem fodder plantations.

Planting fodder plantations of the bush type, laid by cuttings in a permanent place, is

very promising. Such plantations are characterized by a short period before the exploitation and high leaf yield: in the first year after planting the cuttings, 3-4 tons of leaves are obtained from 1 ha, after two - 12-14 tons.



Bush plantations are recommended to be laid horizontally with cuttings 30-40 cm long. After the first exploitation, up to 20 fodder shoots are formed on the bush (3-5 for obliquely planted ones). When growing a bush plantation with seedlings, labor costs are 146.7 man-days, with cuttings - 87.5; cash, respectively, 319.5 and 177.1 rubles.

An analysis of the main economic indicators for the cultivation of seedlings-occulants and seedlings from cuttings in the Dzharkurgan mulberry nursery indicates that when cuttings are taken up, the area in time is three times less, the yield is 3.2 times greater, the net profit per 1 ha from growing planting material in four above.

Reference

1. Рахмонбердиев В.К. Закладка кормовых кустовых плантаций окольцованными черенками шелковицы в условиях Каршинской степи. Ж: «Шелк» №4. Ташкент.1982.
2. Рахмонбердиев В.К. Продуктивность гибридной шелковицы при осенней эксплуатации в условиях Каршинской степи. Ж: «Шелк» Ташкент 1984.
3. Абдуллаев У. «Тутчилик» Тошкент. «Мехнат». 1991.
4. Рахмонбердиев В.К., Набиева Ф.А. Изучение способов посадки неокольцованных черенков сортовой шелковицы в условиях Ташкентской области. Проблемы науки. Москва. 2020.
5. Рахмонбердиев В.К., Ражабов Н.О. Способы размножения сортового тутовника черенками в условиях Каршинской степи. Аграр сохони барқарор ривожлантиришда фан таълим ва ишлаб чиқариш интеграцияси. Тошкент. 2020.
6. Рахмонбердиев В.К., Курбонов Д.Ф. Изучение роста черенков сортовой шелковицы в условиях Кашкадарьинской области. Интернаука. Научный журнал. Москва.2021.
7. Рахмонбердиев В.К. Биологические основы ускоренного создания кормового фонда шелководства путем черенкования шелковицы. Ташкент. Фан. 1980 г.
8. Федоров А.И. Тутоводство. М. Госиздат с/х литературы. 1954.