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Determination of the Growth and Vitality Indicators of Mulber Tree Cuttings in the Climate Conditions of the Republic of Karakalpakstan

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Abstract. The article examines the growth and viability of mulberry cuttings in the climatic conditions of the Republic of Karakalpakstan. The growth and viability indicators of the planted cuttings and the germination period of the experimentally planted cuttings were determined.

Key words: Mulberry, generative, vegetative, pen, viability indicators, leaf.

Today, more than 60 countries of the world are engaged in silk cultivation, 22-24 million boxes of industrial hybrid seeds of silkworms are prepared annually, and 80.9% of the cocoon raw material produced is in the PRC, 16.5% in India, 1.2% in Uzbekistan and 1.4 percent goes to other countries. The world yield of cocoons from one box of worms is 85.0 kg in the PRC, 80.0 kg in India and 56.9 kg in Uzbekistan. The level of uniformity of silk fiber and caliber of cocoons is 90-95% in the PRC, India, Vietnam and Brazil, while it is 50% on average in Uzbekistan.

In general, mulberry tree propagation at the world level, production of productive mulberry seedlings, expansion of special feeding mulberry groves, increase of leaf yield, mulberry tree demand for external environmental factors, cold, drought, salinity resistance and disease control measures, and improvement of cultivated mulberry leaf nutrition A number of foreign authors G.B. Mulev and A. Guldatov (1997) conducted scientifically based experiments on

In addition, in the use of new varieties and hybrids of mulberry trees suitable for different climatic conditions, as well as in other regions of our Republic, as well as in the reproduction of generative (from seeds) and vegetatively propagated, non-naturalized leafy and leafless cuttings, to increase the productivity of selection material and regionalized new varieties, and to determine the quality of the leaf. K. Rakhmonberdiev (1951), R. Kh. Turetsskaya (1961), S. Ostrouxov and P. Khojaevlar (1975-1980), O'. Kochkarov (1984), M. Khibimov (2000) and D. Kholmatov, S.T. .Valievlar (2014) conducted extensive scientific research.

Our research was carried out in 2019-2021 at the Sartbai Pirniyozov farm belonging to "Agro Pilla" LLC, Khojayli district, Republic of Karakalpakstan, when growing mulberry seedlings from cuttings. from 25 meters) was divided to carry out irrigation evenly. Using a hoe, furrows of 7-10 cm depth were made on the top of the field, and 30-40 cm long cuttings were planted in these furrows at a depth of 5-7 cm. Depending on the soil moisture, that is, if the soil is dry, the next day, if the soil moisture is 70-75%, after 2-3 days, water is sent to the egates.

In the conditions of the Republic of Karakalpakstan, it is not necessary to irrigate the sedge, otherwise the surface of the sedge will be muddy, and the lower part of the soil will become excessively hot due to the evaporation of water, and the roots and shoots of the sedge will not rot.

The edge of the field should be mowed every week with a hoe, and another advantage of mowing is that it prevents weeds from taking root and stops them from sprouting completely.

Table 1

Ratio of growth and viability indicators of planted cuttings (2020-2022)

№	Қаламчалар олинган навлар ва дурагай номи	Экилган қаламчалар, дона	Униб чиққан қаламчалар, дона	Унувчанлик, %	Назоратга нисбатан, %	Pd

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1	Совуққа чидамли	100	77±1,87	77±1,81	423,0±2,92	0,992
2	Жарарик-7	100	85±1,95	85±1,94	500,0±3,21	0,998
3	Қишки -1	100	72±1,83	72±1,89	453,0±2,94	0,999
4	Манкент	100	53±1,61	53±1,74	311,0±1,14	0,989
5	Тожикистон уруғсиз тути (қиёсловчи)	100	17±1,21	17±1,19	100,0±1,021	-

When we compared the mutual results, compared to the non-ringed mulberry cutting planted as a control, the seedlings sprouted from the ringed mulberry cutting achieved 4-5 times more germination.

When we observed the experiments, the Pioneer variety germinated three times more. Germination of mulberry seedlings from cuttings according to varieties also had different indicators. Jarariq-7 fairy tale, Cold-resistant comrade and Winter-1 achieved late fertility. We can observe this in the table below

Table 2
Germination times of experimentally planted cuttings
(2020-2022)

№	Тут навлари ва дурагай номи	Тупроқ устида униб чиқиши (кун, ой, йил)		Баҳолаш
1	Совуққа чидамли	15.05.2019	25.05.2019	Ўртаги
2	Жарарик-7	12.05.2019	21.05.2019	Эртаги
3	Қишки -1	14.05.2019	24.05.2019	Ўртаги
4	Манкент	16.05.2019	28.05.2019	Кечки
5	Тожикистон уруғсиз тути (қиёсловчи)	20.05.2019	30.05.2019	Кечки

As can be seen from the results, the quick and high-quality production of ringed mulberry cuttings, despite the repeated words, depends primarily on which part of the prepared cuttings are made of one-year branches and which mulberry varieties or hybrids are made.

As a proof of this, Professor K. Rakhmonberdiev noted in his scientific research results that in his theoretical and practical experiments, ringed cuttings taken from the lower and middle part of a one-year branch gave their results.

Table 3.
Comparison of mulberry varieties by the end of the growing season
(2020-2022)

№	Тут навлари ва дурагай номи	Ўсимликнинг ўртача узунлиги, см	Илдиз бўғзининг йўғонлиги, см	Ҳар бир ўсимликда барг сони, дона	**Pd**
1	Совуққа чидамли	251±2,95	1,89±0,04	83,3±1,18	**0,991**
2	Жарарик-7	252±2,98	1,94±0,06	63,0±1,14	**0,994**
3	Қишки -1	242±2,84	1,97±0,09	69,1±1,15	**0,987**
4	Манкент	243±2,86	2,01±0,11	54,0±1,11	**0,986**
5	Тожикистон уруғсиз тути (қиёсловчи)	121±2,27	1,31±0,01	37,0±1,01	-

As we mentioned in the above sections, rejuvenating and shaping mulberry trees is beneficial in every way. It is recommended to strictly adhere to the methods and terms of giving shape to mulberry seedlings propagated from cuttings with their own roots. For the extreme conditions of the Republic of Karakalpakstan, it was found that 72-85

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cuttings can germinate from every 100 cuttings planted by the method of cutting cuttings. According to the dynamics of growth of young branches formed in selected zoned and prospective mulberry varieties in adverse weather conditions, at the end of the growing season, compared to the control, an increase in the thickness of the root neck by 0.58-0.70 cm was achieved.

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