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INCREASING THE LEAF YIELD OF THE MULBERRY TREE

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Abstract

Cocooning is one of the most important additional branches of agriculture. The cocoon industry of our country is responsible for providing the textile industry of the national economy with natural silk fiber and the need of the population for silk materials, as well as producing high-quality cocoon from silk kurti. The time for general guidelines slogans is over. Therefore, it is now necessary to advance the technology of accelerating production, relying on the innovations of science and technology and the experiences of advanced farms. In order to obtain high-quality cocoons and silk fiber and silk materials that meet the requirements of state standards, first of all, it is necessary to breed mulberry trees, which are its only food, along with the care of high-yielding breeds and hybrids of silkworms based on the recommended agrotechnical rules.

Keywords: Seedling,silkworm, phosphorus, potassium, sprout, nitrogen fertilizers, sowing seeds, external environment, air temperature, humidity, mulberry trees, insulation..

INTRODUCTION

The mulberry tree is the only food for silkworms raised in our country. Mulberry leaf contains nutrients such as sugar, protein, fat, water, enzymes and various vitamins that fully support the silkworm's metabolism. As soon as the silkworm emerges from the eggs, it feeds on the mulberry leaf and eventually spins a cocoon.

Therefore, the more mulberry leaves, the more worms can be fed and the more cocoons can be produced.

The natural climate and soil conditions of Uzbekistan are favorable in all respects for the growth and development of the mulberry plant.

The main sources of strengthening the cocoon feed fund in farms are expanding mulberry groves, establishing new bush mulberry groves, transferring high-bodied single-row mulberry seedlings to the edges of fields and roadsides, and increasing the leaf yield due to their good care. It is possible to increase the leaf yield of mulberry trees based on the rational use of organic and mineral fertilizers and mechanization of existing mulberry trees. In order to expand the cocooning food base, it is necessary to grow fertile cultivars from fertile, rich-yielding mulberry trees by vegetative propagation. The mulberry tree is mainly propagated in two ways, i.e., generatively from seed and vegetatively.

Mulberry seed propagation is one of the oldest methods. Sowing seeds is technically easy and does not require a lot of labor and money. But it also has its own disadvantages. For example: the mulberry tree is two-way, in its natural state, when some fertile seed-bearing flowering trees are

pollinated with mulberry dust, the seed seedlings grown from it will be of poor quality. In addition, it takes a lot of time to grow a seedling grown from a seed. Bush mulberry made from seedlings grown from seeds can be used for 3-4 years, and leaves of tall mulberries can be used for feeding silkworms for 7-8 years. When growing mulberry vegetatively, the mother tree retains its genetic characteristics.

Main part: The leaves and fruits of grafted and grafted mulberry trees propagated from cuttings can be used in 2 or 3 years. One of the effective methods of vegetative propagation of fruitful mulberry is to grow it from cuttings. From this, the mulberry cutting is separated from the mother tree, planted in comfortable conditions and properly cared for to take root. Mulberry seedlings grown in this way become independent plants with their own roots. Due to the development of the root system of mulberries grown from cuttings, the above-ground parts grow vigorously, and leaves are harvested 2-3 years earlier than those propagated from seeds, and the productivity is much higher. When the leafy branches of mulberries grown in this way are cut, new branches are quickly caught. Finally, fertile seedlings are grown from cuttings in a short period of time and at a low price.

After planting a cutting, the degree of production of roots and branches depends on heredity and external factors, and also depends on the place where the cuttings are taken from. The quantity and quality of mulberry tree growth depends on its composition along with other soil properties. The role of mineral and organic fertilizers added to plants is very important. These substances have a positive effect on plants only when they are in a certain amount in the soil. If the trees lack mineral substances, their growth development and productivity will be significantly reduced, and if there is an excess of minerals, the plant's productive use of mineral fertilizers will decrease, and it will have a harmful effect on beneficial microorganisms in the soil. When there is a lack of nutrients in the soil, their place is filled by applying organic and mineral fertilizers.

It was determined that when 8-10 kg of manure is mixed with 70-80 g of phosphoric fertilizers in the pits before planting, the seedlings will grow well and will reach the harvest 1-2 years earlier compared to unfertilized seedlings. The complete supply of nutrients to the plant largely depends on the natural fertility of the soil, as well as the agrotechnical fertilizing system used for it. The rate of applied fertilizer and the ratio of nutrients in the fertilizer are determined depending on the local soil and climate conditions.

For vigorous growth and development of planted seedlings, the nursery should be constantly fertilized. The type and quantity of organic and mineral fertilizers applied to the nursery is determined depending on the fertility level of the soil, the physical properties of the soil, humus, and a small amount of mobile nitrogen, phosphorus, and potassium substances.

Results and Discussions: It is better to give nitrogen, phosphorus and potassium fertilizers together to accelerate the active growth of the seedling body and better development of the roots. In our next experiment, we will consider the effect of mineral fertilizers on the growth and development of mulberry seedlings.

The degree of bruising of seedlings planted in the experiment.

Table 4.1

Variant	Number of seedlings planted	The number of bruised sprouts according to returns (pieces)				Average number of bruised shoots	Bruise rate (%)
		I	II	III	IV		
B_1	200	175	178	178	185	179	89,5
B_2	200	190	192	190	188	190	95,0
B_3	200	197	196	199	196	197	98,5

4.1. It can be seen from the data of the table that 179 out of 200 sprouts planted in option 1, where no mineral fertilizers were applied, were bruised and the degree of bruising was equal to 89.5%. 190 out of 200 seedlings planted in option 2 fertilized with nitrogen fertilizers in the amount of 120 kg/ha, phosphorus 60 kg/ha, potassium 30 kg/ha, and the level of germination was 95%.

Nitrogen fertilizers 150 kg/ha, phosphorus 90 kg/ha, potassium 45 kg/ha were fertilized with 197 out of 200 sprouts planted in the 3rd option, the level of blooming was equal to 98.5%.

4.1. As can be seen from the data in the table, when mineral fertilizers were used along with planting, the level of sprouting was observed to increase from 5.5% to 8.5%.

The effect of mineral fertilizers on the length and number of leaves of mulberry seedlings.

Table 4.2

Options	Follow-up periods									
	26.04		21.05		16.06		11.07		06.08	
	Seedling length (cm)	Number of leaves (pieces)	Seedling length (cm)	Number of leaves (pieces)	Seedling length (cm)	Number of leaves (pieces)	Seedling length (cm)	Number of leaves (pieces)	Seedling length (cm)	Number of leaves (pieces)
B_1	6	3	14	4	36	9	95	20	123	24
B_2	8	4	26	7	67	16	130	25	185	36
B_3	10	6	29	9	72	18	136	28	190	38

Effect of mineral fertilizers rate on the length of mulberry seedlings and the number of leaves is as follows 4.2. we can see from the table.

4.2. as it can be seen from the table, the length of the seedlings in the phenological observations conducted on April 26 was 6 cm ha in option 1 without fertilizer, nitrogen fertilizers 120 kg/ha, phosphorus 60 kg/ha, potassium 30 kg/ha, the length of seedlings in option 2 was 8 cm, nitrogen fertilizers It was found that the length of the seedlings of the 3rd option, which was fertilized with 150 kg/ha, phosphorus 90 kg/ha, and potassium 45 kg/ha, was 10 cm long. it can be seen that as a result of the effect of nitrogen fertilizers on the growth of seedlings, the length of the seedlings in the experimental options increased by 33.3-66% compared to the control option. in this case, it was found that the number of leaves formed on the branches increased sharply.

The second phenological observation of the experiment was conducted on May 21. In control option 1, the length of sprouts is 14 cm, and the number of leaves is 4.

In the 2nd experiment, the height of the sprouts was 26 cm, the number of leaves was equal to 7, and compared to the control option, the height of the sprouts increased by 12 cm, and the number of leaves was 3 more.

Experiment 3 observation was conducted on June 16. In this case, the height of seedlings in the 1st control option was 36 cm, and the number of leaves was 9 pieces. In the 2nd experiment, the sprouts were 67 cm tall and the number of leaves was 16. In this version, we witnessed that the height of the seedlings increased by 31 cm and the number of leaves increased by 7 pieces compared to the 1st version.

Experiment 4 observation was conducted on July 11. It was determined that the length of seedlings

in the 1st experiment is 95 cm, and the number of leaves is 20. The length of the sprouts in the 2nd experiment was 130 cm, and the number of leaves was 25. In the past 25 days, we witnessed that the height of the seedlings in the experimental variant was 35 cm longer than the height of the seedlings in the control variant, and the number of leaves in it increased by 5 pieces.

The 5th observation in the experiment was conducted on August 6. At this time, it was found that the number of leaves in the 1st control option was 123 cm tall and 24. The height of seedlings in the 2nd experiment was 185 cm, and the number of leaves was 36. In option 3, it was found that the height of the seedlings was 190 cm and the number of leaves was equal to 38.

Conclusion: So, when seedlings are fertilized with mineral fertilizers mixed with organic fertilizers, it was found that the growth and development of seedlings, as well as the formation of leaves in them, increases by 50-54% compared to the option not fertilized with mineral fertilizers.

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