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The results of institute trials of highly productive selection numbers of mulberry

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Abstract

In the article the results of 2016 on institute trials of mulberry selection numbers 1-09, 2-09, 3-09, 4-09, 5-09 with control sort Tadjikskaya seedless were given. The best candidates to the mulberry sorts on the results of three years trials (2015-2017) will be sent to the State competitive trials.

Keywords: Institute trials, productive selection, mulberry

Introduction

Despite to many problems of transition period from centralized to free market system of economy, government of Uzbekistan can preserve the basis of cocoon and raw-silk production. At present our country ranked the third biggest cocoon and raw-silk producer in the world after China and India and remains the first producer in the world per head of the population.

After becoming independent, thanks to initiative of I. Karimov the 1-st President of Uzbekistan, our government attention goal-oriented work on preservation of sericulture branch infrastructure, increase of sericulture production and raise of enterprise export potential were conducted. A number of resolutions of the government of Uzbekistan, where goal-oriented program of stable development of sericulture branch was worked out.

Within the framework of this program, council of Minister of the Republic of Karakalpakstan and region councils' measures on laying mulberry plantations, and also linear plantations with taking into consideration of useless plantations substitution and plantings expansion ensuring requirements in mulberry leaves with taking into account of supposed silkworm cocoon production growth were worked out. Obtaining of highly qualitative cocoons in many respects depends on the number and quality of mulberry leaves. In its turn, yield and nutritiousness of leaves depend on mulberry sort, plantation type, agrotechnics level and also availability of moisture and other elements in leaves. Sorts SANIISH ^[1], SANIISH 44 ^[2], Djararik 7 and Djararik 8 ^[3] were obtained by linear selection application. Sorts Zimostoykiy ^[4] and Severniy ^[3] for north zones of the republic were created by the same method. Mulberry sorts Baysun, Uzhniy1, SANIISH-40 and Golodnostepskiy 6 for various natural climatic zones and Saline territories of our country were created by the method of classical selection. High-yielding mulberry sorts were obtained by usage of various methods, in particular by x-rays application.

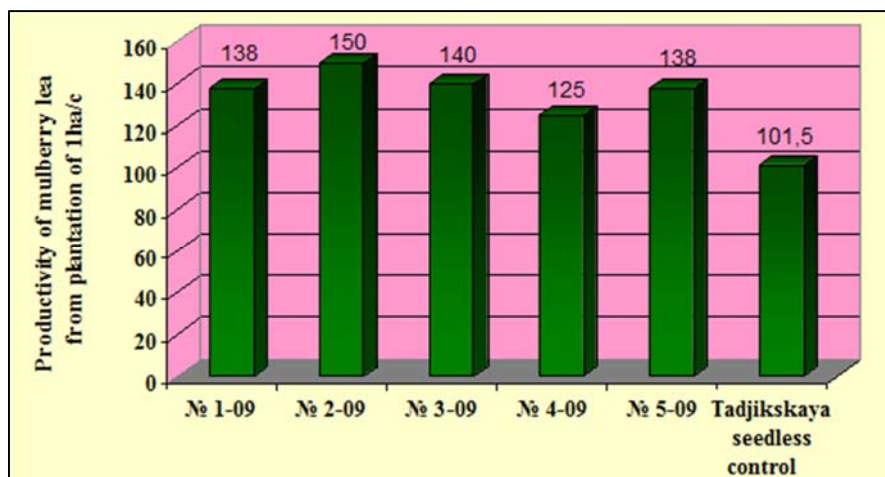
The Aim of this research is creation of high-yielding and disease resistant mulberry sorts for farms of Uzbekistan.

Various sorts and forms of mulberry, their growing in collection, selection nurseries and experimental plantations of bushed type at planting scheme 4x0.5 m are the objects of the research. Caring of the plants was conducted in accordance with agrotechnical rules. Silkworm hybrid Ipakchi 2 x Ipakchi 1 was used in selection numbers trials. Feeding was given on weight, by counting 900kg for 1 box of larvae. Experiments were carried out in accordance with methods ^[5] of mulberry sorts and silkworm races trials. Variants consisted of 4 replications, by 200 caterpillars in replications. Hygrothermal regime, intended for white cocoon races of silkworm was maintained over the whole rearing period.

The zoned sort Tadjikskaya seedless was used as control in conducting of institute trials of mulberry selection numbers 1-09, 2-09, 3-09, 4-09, 5-09. Rearing of silkworm caterpillars by leaves of aforecited selection numbers was conducted in summer period of vegetation.

Productivity of silkworm selection numbers was defined together with estimation of leaves sizes and weight. Yield capacity is the main parameter of selection material's value. Yield capacity of leaves was determined in summer

period of silkworm larvae rearing (in the middle of the 5 age), obtained figures were presented in the following histogram:



Leaves productivity of mulberry selection numbers, passing institute trials

Leaves high yielding on the research results was observed in variant 2-09 (150 c). Variants 3-09, 1-09 and 5-09 were insignificantly inferior to variant 2-09 on their indexes where mulberry leaf productivity made 138-140 c. per ha of plantation. On rating experimental variants are arranged in the following order: №2-09, №3-09, №1-09, №5-09 and №4-09. As seen from the results, all variants surpassed control sort Tadjikskaya seedless (101.5 c).

Conducting of silkworm caterpillar feeding is one of impartial assessment of productivity of mulberry

experimental selection numbers. As it was said before, zoned hybrid Ipakchi 2 x Ipakchi 1 was used.

Biological indexes of obtained cocoons after rearing by mulberry leaves of selection numbers in spring period of vegetation are presented in the following table:

Biological indexes of cocoons in silkworm caterpillars feeding by mulberry leaves of selection numbers in spring period of vegetation (10.05.2016)

Selection numbers of mulberry	Larvae viability, %	Mass of one life cocoon, g	Cocoon shell percentage, %	Cocoons yield from each box, kg	Leaf consumption for obtaining of cocoons 1kg, kg
№ 1-09	96,5	1,880 ± 0,02	22,60	81,6	11,03
№ 2-09	93,3	1,960 ± 0,17	22,45	82,2	10,94
№ 3-09	92,37	1,810 ± 0,07	24,25	75,23	11,96
№ 4-09	93,37	1,970 ± 0,07	22,69	82,77	10,87
№ 5-09	94,87	1,920 ± 0,05	22,76	81,96	10,98
Tadjikskaya seedless (control sort)	92,37	1,820 ± 0,07	24,5	75,65	11,89

Research results show, that cocoons yield from each box in selection numbers №4-09, №2-09 and №3-09 made respectively 82.77 kg, 82.20 kg and 81.96 kg. The rest numbers also surpass control sort Tadjikskaya seedless. Regardless of research variants, larvae viability is very high, on average made 92.37-96.5 %. Mass of one cocoon is typical for spring period of worm feeding and made on average 1.810 – 1.970 gr.

Feed consumption for obtaining of 1kg cocoons has great significance. The least feed consumption was observed in numbers №4-09, №2-09 and №5-09, which observed within the bounds of 10.87 – 10.98 kg.

On the results of three-year institute trials (2015-2017) mulberry best selection numbers will be sent to the State competitive testing.

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