ISSN: 2776-0960 Volume 5, Issue 1 January, 2024

ResearchJet Journal of Analysis and Inventions
https://reserchjet.academiascience.org

EFFECT OF FEEDING LARVAE WITH NAVDOR MULBERRY LEAVES ON BIOLOGICAL INDICATORS OF SILK GLAND AND COOP PRODUCTIVITY

CH. I. Bekkamov
Candidate of Agricultural Sciences, Professor,
Department of Sericulture and Mulberry Industry
Tashkent State Agrarian university, Tashkent, Uzbekistan

X. E. Raxmanova
Docent, Department of Sericulture and Mulberry Industry,
Tashkent State Agrarian University, Tashkent, Uzbekistan

B. B. Sharofova
Student, Tashkent State Agrarian University, Tashkent, Uzbekistan

M. J. Sultonnazarova
Student, Tashkent State Agrarian University, Tashkent, Uzbekistan

Abstract
Currently, there are more than two hundred varieties of mulberry for feeding silkworms in our republic, and among them, among the mulberry varieties imported by our breeding scientists, the ones with high productivity and nutritional characteristics are selected according to demand, and by feeding silkworms with fertile mulberry leaves, the biological parameters of larvae and the productivity of cultivated cocoons under the influence of silk gland activity were comparatively studied.

Keywords: Silkworms, mulberry leaf, silkworm, mulberry, mulberry varieties, mulberry tree, mulberry tree, mulberry leaf, larva, viability, larval stage, cocoon, productivity.

Introduction
Due to the fact that mulberry silkworms feed only on mulberry leaves, it is very difficult to meet their nutritional requirements.
Because the level of agrotechnical care and methods of using special nutrient-giving mulberry trees in our Republic and regions differ, this situation does not affect the biochemical composition of mulberry leaves. Despite certain scientific

ResearchJet Journal of Analysis and Inventions
https://reserchjet.academiascience.org

works in this direction, the influence of the level of nutrition of fruitful and productive mulberry leaves on silk gland activity and cocoon productivity has not been well studied. In order to study this topical issue, it is important to conduct our experiments on feeding silkworms with fertile mulberry leaves and determine its effect on the silk gland activity.

Research Methods and Materials:

It is known that today in our republic there are more than 200 varieties of mulberry. Among them are mulberry varieties created by our breeding scientists and imported from the Commonwealth of Nations and abroad. Mulberry varieties created using selection methods usually have high productivity and nutritional characteristics and meet the demand.

K.R., who has been experimenting with propagation of mulberry from cuttings for many years and achieved good results. If a mulberry bush is established in a mulberry pen according to the method recommended by Rakhmonberdiev (1997), the leaves can be used for feeding silkworms in the 3rd-4th year.

In order to determine the quality indicators of silkworm feed, M. Zhoraboev (1999) conducted research and determined the feed absorption coefficients during the period of rearing the larvae with fertile mulberry leaves growing in Tajikistan. According to the research results, the larval period of silkworms fed with fertile mulberry leaves was reduced by 1.5 days, their viability increased by 7.75%, and the yield of cocoons increased to 11 kilograms per box of worms.

Research results: In conducting our experiments, we used Tajikistan seedless, Jarariq-7, Oktabar and Uzbekistan varieties created by scientists of the Silk Research Institute.

Larvae of the comparative variant were fed with freely pollinated hybrid mulberry leaves. The effect of mulberry leaves on silk gland activity is given in Table 1 below.

ResearchJet Journal of Analysis and Inventions
https://reserchjet.academiascience.org

Table 1 Effects of feeding larvae with fertile mulberry leaves on silk gland biological parameters and cocoon yield

Hold on varieties name	Silk cloth indicators		Worms vitality, % X±Sx	Worm period stretch, day	Total wrapped cocoons, %	1 box from the worm received cocoon crop, kg	Pd
	Weight, mg	Size, sm^3					
Foreign hybrids							
Tajikistan seedless	1600	1,58	93,0±0,70	21	95,5	69	0,990
October	1550	1,55	93,5±0,71	21	95,0	71	0,992
Injury-7	1650	1,63	94,0±0,72	21	96,5	75	0,999
Uzbekistan	1630	1,60	93,5±0,72	21	96,0	73	0,996
Hybrids	1450	1,45	92,0±0,70	21,5	92,0	65	-
Local hybrids							
Tajikistan seedless	1620	1,60	93,0±0,72	23	96,0	70	0,998
October	1580	1,57	93,5±0,73	23	95,5	72	0,994
Injury-7	1670	1,65	94,5±0,74	22	96,5	78	0,996
Uzbekistan	1640	1,62	93,5±0,71	22	96,0	76	0,996
Hybrids	1480	1,48	92,0±0,69	24,5	92,0	66	-

From the data in this table, it can be seen that silkworms fed with fertile mulberry leaves had slightly higher silkworm performance compared to those fed with non-fertile mulberry leaves.

Including; in the experimental variants, the weight of the silk gland was 1550-1650 mg, and the volume was 1.55-1.63 cm3, while in the comparative version this indicator (weight 1470-1480 mg, volume 1.45-1 , equal to 48 cm2) compared to the experimental options, it was found that the weight is 6.9-11.5% less, and the volume is 6.8-10.1% less.

So, it was found that if silkworms are fed with fertile mulberry leaves, the larvae grow well, the silk gland develops normally and accumulates enough silk material.

Therefore, when the numbers in the table are compared, it shows that the viability of worms fed with fertile mulberry leaves is 1.5-2.5% higher than the comparative option. The highest rate was observed in variants using Jarariq-7 and Uzbekistan varieties. Feeding with fertile mulberry leaves reduces the length of the larval period by 1.5-2 days.

Summary. Good development of the body of mulberry silkworms, rapid growth of the silk gland, sufficient synthesis of silk material and high cocoon productivity, as well as increasing the economic efficiency to the level of income, to the

ResearchJet Journal of Analysis and Inventions
https://reserchjet.academiascience.org

continuity and breaks of leafing during the agrotechnics of feeding with nutritious and fertile mulberry leaves and it is recommended not to reduce the amount.

In fact, when silkworms were fed with fertile mulberry leaves, the total number of cocoons was 95-96.5%, compared to the control option (92.0%), 3.0-4.5% more cocoons per box of worms and the yield was found to be 10-12 kilograms more.

In general, according to the analysis of the obtained data, we can conclude that when silkworms are fed with fertile mulberry, the activity of the silk gland is better developed, the amount of silk liquid collected in it increases, the cocoons are larger and the cocoons obtained from a box of silkworms increase due to the increase in silk products. It was clearly observed in the conducted scientific research that the yield increased by 10-12 kilograms and the result was significantly higher in terms of productivity indicators compared to the comparative option.

References

1. Abdullaev U.A. – “Tutchilik” Toshkent, Mehnat, 1991.
2. Axmedov N.A, Bekkamov Ch. Tut ipak qurti mahsuldorlik belgilarini namoyon bo‘lishida ozuqa miqdorini ahamiyati. // O‘zbekiston agrar fani xabarnomasi– Toshkent. 2002. №3-son. 116-117 betlar.
3. Abdurasulov Sh, Jumanova U, Bekkamov Ch. — “Ipak qurtiga yoshlari bo‘yicha berilgan barg va uning yeyilishi”. “Zooveterinariya”, Toshkent, 2010. №9.
4. Mirzaeva Yo.Ya. “Tut ipak qurti biologiyasi” Darslik. Toshkent, 2017-y.
5. Bekkamov Ch.I., Q.A. Jumag‘ulov, K.N. Ahmedov, F.B. Suvonqulova, M.A. Qodirova, U.O‘. Xudaynazarova - “Beriladigan ozuqaning tarkibiy miqdori va to‘yimlilik darajasini ipak qurtining mahsuldorlik ko‘rsatkichlariga ta’siri” Zooveterinariya ilmiy-ommabop jurnal. 2016-yil №4 (101)-son. 41-43 betlar.
6. Bekkamov Ch.I., N. Abduqayumova, H.E. Raxmanova, A.D. Suvonova, F. Suvonqulova-“Qurtxonadagi harorat va namlikning pillani biologik ko‘rsatkichlariga ta’siri”. Agro-Ilm ilmiy-ommabop jurnal. 2016-yil №1(39)-son.
7. Bekkamov Ch.I., Ismatullaev H.T.- “Tut ipak qurti zotlarini xorij texnologiyasi asosida parvarishlashni qurtlik davrining davomiyligi va lichinkalarning biologik ko‘rsatkichlariga ta’siri”. O‘zbekistonda pillachilikni rivojlantirish istiqbollari va innovatsion texnologiyalarni joriy etish» mavzusida Respublika ilmiy-amaliy anjumani. 10-may 2021-yil. 165-168 betlar.
8. Bekkamov CH.I. “Mutaxassislikka kirish” Toshkent, “Xalq nashriyoti” 2023-y. Darslik; 224–b.