IMPROVING THE SPINNING PROPERTIES OF EXPENSIVE TEXTILE RAW MATERIALS BY PROCESSING SILK WITH SFM ASSISTANCE

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Abstract. The conducted studies have shown that in order to ensure the continuity of the work of silkworm enterprises, cocoons are stored in the warehouses of silkworm enterprises. Although this may seem like a simple matter from the outside, it is of great importance. In order to eliminate these problems in silkworm enterprises, it was found that cocoons modified with surfactants obtained from "Bardo" and "Sivush" oils, which do not have a negative effect on cocoon washing and at the same time contribute to good wetting of the shell, increased the yield of raw silk by 1.9-2.7% compared to the control variants.

Keywords. Cocoon, defective cocoon, cocoon slime, Bardo and sivush oil, silk rings, chemical and biological mixture, raw silk.

Annotatsiya. O'tkazilgan tadqiqotlar shuni ko'rsatdiki, ipak qurti korxonalari ishining uzluksizligini ta'minlash maqsadida pilla ipak qurti korxonalari omborlarida saqlanadi. Garchi bu tashqaridan oddiy masaladek tuyulsa-da, bu katta ahamiyatga ega. Ipak qurti korxonalarida ushbu muammolarni bartaraf etish uchun "Bardo" va "Sivush" moylaridan olingan sirt faol moddalar bilan o'zgartirilgan pilla, pilla yuvishga salbiy ta'sir ko'rsatmasligi va shu bilan birga yaxshi namlanishiga hissa qo'shishi aniqlandi. qobiq, xom ipak hosildorligini 1,9% ga oshirdiBoshqarish variantlariga nisbatan -2,7%.

Kalit so'zlar. Pilla, nuqsonli pilla, pilla shilimshiq, Bardo va shunga o'xshash moy, ipak halqalar, kimyoviy va biologik aralashma, xom ipak.

Аннотация. Проведенные исследования показали, что предприятия по производству тутового шелкопряда хранят коконы на складах предприятий по производству тутового шелкопряда с целью обеспечения непрерывности сияющего шелкопряда. Хотя на первый взгляд это кажется простым делом, оно имеет большое значение. Было обнаружено, что коконы, модифицированные поверхностно-активными веществами из масел "Бардо" и "сивуш" для устранения этих проблем на предприятиях по производству

ISSN 3030-3907

шелкопряда, не оказывают негативного влияния на мытье коконов и в то же время способствуют хорошему увлажнению. шелуха, шелк-сырец увеличили урожайность на 1,9% -2,7% по сравнению с вариантами управления. **Ключевые слова.** Кокон, дефектный кокон, коконная слизь, Бардови подобное масло, шелковые кольца, химическая и биологическая смесь, шелк-сырец.

Introduction

Research and development work is being carried out worldwide to develop new scientific and technical solutions for resource-efficient technologies and equipment for silk production [1]. In this regard, the production of high-quality raw silk helps to provide employment for the rural population, prevent migration to large cities, and ensure paid employment. Particular attention is paid to providing the silk industry with raw materials, saving energy and resources[2], improving the properties of products made from pure silk or its blends, and justifying production technological processes, parameters, and operating modes.

The sustainable development of the economy of our republic, the annual growth of its export potential, and the increase in the production of quality products are also leading to an increasing demand for natural silk[3]. Based on the production and processing of natural silk fiber from cocoons grown in Uzbekistan, comprehensive measures are being taken to produce a wide range of low-cost and high-quality textile and light industry products and increase their competitiveness.

Although silk fiber has a small share in the world textile market (less than 0.2%), 60 countries around the world are engaged in its production. The main producers are in Asia, but recently sericulture industries have also been established in Brazil, Bulgaria, Egypt and Madagascar. Spun silk is labor-intensive. In China, about 1 million workers are employed in the sericulture sector. The silk industry employs 7.9 million people in India and 20,000 families in Thailand. China is the world's only major silk producer and a leader in supplying silk to world markets. India is the world's second largest silk producer. Sericulture helps to provide employment to the rural population, prevent migration to large cities and provide the population with paid employment [4].

In the textile industry, the development of new, modern textile complexes with a final production format, aimed at producing competitive export products, should be a priority.

Natural silk is a valuable textile raw material with its sanitary and hygienic properties, beautiful appearance, luster, firmness, elasticity, hygroscopicity, and good dyeing. A lot of scientific research has been conducted to solve the problems

ISSN 3030-3907

of cocoon farming, namely, improving cocoon cultivation, primary processing, storage, and washing, and a number of achievements have been achieved.

To preserve the natural state of cocoons and cocoon shells, the air temperature in the cocoon storage warehouses of the cocoon processing plants and cocoon enterprises should not exceed 15-20 -0 ^{C}, and the relative humidity -should not exceed 60-70%. Due to the lack of opportunities to create such uniform moderate microclimate conditions throughout the year in the cocoon storage warehouses of the existing cocoon enterprises in our republic, the air temperature and relative humidity in the warehouse have a negative effect on the cocoon raw materials stored in these warehouses. As a result, the structural structure of the rings and packages formed by silk fibers in the cocoon shell is disrupted, the thread layers in the shell are damaged, and sericin softens and deteriorates. The yield of raw silk from dry cocoons stored for 10-11 months decreased by 6.5%, the spinnability by 7.1%, and at the same time the yield of the fluffy cocoon los produced during the spinning process increased by 1.6%, and the yield of cocoon roving by 1.3%.

To ensure the continuity of the work of the cocoons, they are stored in the warehouses of the cocoons. Although this may seem simple from the outside, it is of great importance. In order to eliminate these problems in cocoons, experimental work was carried out using chemical preparations that do not adversely affect the cocoon washing and at the same time contribute to good wetting of the shell [5].

In the laboratory of the Department of Chemical Technology of the Tashkent Institute of Textile and Light Industry, a new surfactant was obtained by synthesizing "Borda" and "Sivush" oils, which are waste products of the Andijan "Biochemical" plant [6].

During the experiment, 60 kg of cocoons were modified with the following 2 compositions of SAM using sprayers.

1. Bardo (15%) + sliver oil (5.0%) + Na O H (10%) + glycerin(0.5 %)
2. S ivush oil (7.0%) + bardo (20%) + HCl (10%) + glycerin(1 %) .

The prepared solution is passed through a filter ib s washed away Neutralized with H_2SO_4 asid at a concentration of 10-15% getting ready taken [7].

The processed cocoons were placed in hemp (rovendux) bags (30 kg) and stored for 210 days in the warehouses of the cocoon enterprise. When the cocoons were modified, it was found that a monomolecular thin film layer was formed on the cocoon shell.

During the observation of the storage period of the cocoons, it was not affected by metrological conditions, various insects, and various other factors, as a

ISSN 3030-3907

result of which the amount of raw silk produced during spinning was better than that of the control. The results are presented in Table 1.

Table 1

The chemical substance was modified using SAMs raw silk from cocoons

Variant	Concentration %	Cocoon storage interval, thoughts	Comparison expense , g	Raw silk output ,%
1	15	10-11	2.55	39.1
2	15	10-11	2.66	3 7.3
Control	-	-	2.8 1	35.1

The research work was continued at the cocoon enterprise of the “ROYAL SILK” Limited Liability Company, Bulakbashi district, Andijan region. Cocoons brought from the Asaka and Pakhtaabad cocoons were modified with a surfactant newly obtained from biochemical waste “Borda” and “Sivush” oil at a concentration of 10-15% for 5-8 hours before spinning, and the results presented in Table 2 were achieved [8].

Table 2

Surface active of substances cocoon to be thrown effect

Surface active substances .	Modification to do		Comparison expense , g	Raw silk output ,%
	Concentration ,%	Time , hour		
Bardo	1 0 /1 0 15 / 15	5 / 5 8 / 8	2.5 5 / 2.6 7 2.6 6 / 2.7 2	39.2 / 37.3 1 37. 3 / 36. 1
Sivush	1 0 /1 0 15 / 15	5 / 5 8 / 8	2.6 1 / 2. 79 2.6 8 / 2.8 4	3 7.6 / 35.7 37.1 / 35 .6
Control	-	-	2.7 2 / 2.8 8	3 5 . 1 / 34. 4

Note : in the picture - I pakchi-1 , in the denominator - Mechchenna pi l la varieties are listed .

As can be seen from Table 2 like a cocoon surface active substances concentration increase and modify through running as a result his/her comparison expense decreased , cocoon of the floor on top of conformational changes happened as [9] , the cocoon moisture , silk thread finding and shaking processes improved . Also , Andijan biochemistry from the factory taken "Bardo" and "Sivush" from oils

ISSN 3030-3907

taken surface active substances modified withcocoons control to the options relatively raw silk output [10]. 1.9-2.7% increase apparently is standing.

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ISSN 3030-3907