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The Perspective Directions For The Development Of Sericulture

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ABSTRACT

The article presents the problems that arise in the organizational and practical aspects of cocoon cultivation at home, based on personal experience, and recommendations for their solution.

KEYWORDS

Cocoon, Silkworm, Climatic Conditions, Cocoon Weight, Shell Thickness.

INTRODUCTION

Our country was a leader in the former Soviet Union in the field of cocoon cultivation and processing. According to the data, in the 90s of the last century, the annual production of cocoons in Uzbekistan was more than 35,000 tons, and silk production was almost 2,000 tons [1].

In the former Soviet Union, cocoon cultivation was a state monopoly. Silk factories used mainly domestic equipment and technology, and foreign equipment and technology were gradually introduced, but they were relatively few. In the first years of independence, due to the decline in attention to the silk industry, silkworm enterprises, whose production facilities and technology were spiritually and physically degraded, and which were in economic crisis, gradually reduced or completely closed down. The amount of cocoon cultivation has dropped dramatically. Silkworm enterprises could not meet market demand. Tax problems, especially in a market economy, have led to an increase in the cost of recycled cocoons in spiritually and physically worn equipment. In recent years, the state has paid more attention to this area, especially in the Resolution of the President of the Republic of Uzbekistan dated July 31, 2019 No PP-4411 "Additional measures for the development of

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deep and processing in the silk industry" [2]. They were also provided with comprehensive assistance.

MATERIALS AND METHODS

Natural silk is a product produced by animals using different types of arthropods, insect class, coin wings, and four stages of life: eggs, worms, moths, and butterflies. Most species of these animals produce silk during the transition from the second stage to the third, from which a densely structured and oval-shaped cocoon called a cocoon is wrapped around it, which protects it from various external environments and protects it from attacking enemies. Silkworm care is mainly carried out in 2 different conditions: on an industrial scale and at home. On an industrial scale, silkworm care requires a large complex and the method is mostly used abroad. In the Republic of Uzbekistan, most silkworms are raised at home. When silkworms are cared for at home, it means private households living in different living conditions. Private houses will not be adapted for silkworm rearing and will mainly include a human living room, additional appliances, outdoor sheds, awnings and more. The silkworm is often used for 1.2 sleep periods from the living room. They can be light, airy, floor and floor, with a heating device or adapted for heating. The rest of the additional household appliances are not plastered, the floors are usually made of concrete or baked bricks, or the floor itself, not adapted to heating, there may be cracks in the doors, windows, walls, and additional work is done to eliminate these defects. Silkworms are usually brought into these rooms after 2 waking hours and spend 3, 4 sleeps there. At the end of feeding silkworms at home, a wet cocoon with a live sponge on the inside is prepared [3,4].

The cocoon wrapping consists of several stages, the first and second stage is the preparation of the cocoon worm for cocoon wrapping, and the third, i.e. the main stage, is the silkworm wrapping the cocoon shell. He shakes his head as if he were drawing a figure of eight, as he wraps the silk around the wall of the loose layer, the height of the "figure" reaching 1-2 millimetres. Each successive "number" will be slightly shifted from the previous one. After the silkworm has wrapped a bundle of 15 to 25 rings, the cocoon does not stop for a moment, but turns its head to the other side and begins to wrap the second one next to the first bundle.

In this way the worm moves 500 and more, forming the shell of the cocoon. In the fourth stage of cocoon wrapping, the silkworm wraps the last, innermost layer of the cocoon - a thin, "sannoh" layer, while the "Sannoh" layer consists of octagonal rings of irregularly shaped thread that are thinner than the previous layers of yarn. There will be less seretsin (silk glue) on this floor. This layer acts as a soft cushion for the dome and forms a spring-shaped dome on top of the dome head. The silk of the cocoon shell wrapped in the third stage of the cocoon wrapping period is of great importance for the industry [5-9]

In the first stage, the wrapped "scaffold" is called "los", which is cleaned from it while picking up the cocoons on the handle. Before cocooning, the cocoon is cleaned in the second stage. The much softer, inner layer, which is wrapped in the fourth stage of the cocoon shell, i.e. the "sannoh" layer, remains on the

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sponge-like a curtain after the cocoon has been spun.

Once the silkworm is surrounded by the cocoon, it turns into a sponge inside the cocoon. The skin of the young sponge becomes whitish, soft, unbearable, darkens after three days, becomes more mature, and becomes mushroomy. Natural silk is the most valuable textile raw material with high mechanical and physical properties, elegant appearance, easy dyeing properties. However, the labour required to produce it, the initial processing, is very high. Therefore, it is used in a valuable and limited amount compared to other types of textile industry raw materials. The weight of the cocoon also depends on the breed of the worm and how it is fed. A cocoon wrapped in worms under favourable conditions weighs 2-3 grams, and the fact that the cocoon is lighter indicates that the worms are not well fed. There are also problems in caring for silkworms. In many cases, no attention is paid to the time of delivery of the silkworm to the place of care after it emerges from the seed.

The worms are left without suckling once or twice in the meantime, and in some cases, due to the irresponsibility of some officials in their work, the worms removed from the seed at two intervals are delivered to the same place at the same time. And as a result, there is an imbalance in their care. Worms are divided into 2–3 groups by size - large. The process of caring for them is artificially disrupted and the caregiver does not pay attention to it. Especially in the period when people stop caring for worms, which is called the "sleep" of worms, 2-3 different groups (saturated, half-saturated, unsaturated) appear. And after "sleep" they begin to care for at the same time. As a result, the cocoons, which are surrounded by half-saturated and unsaturated worms, are of poor quality or have some kind of defect, thin-walled and other appearances. Care will be the same, but the cocoons being prepared will be different.

RESULTS AND DISCUSSION

As a result of such treatment of silkworms, the quality of the cocoon is negatively affected. In some cases, the rooms where silkworms are cared for do not meet the sanitary-hygienic requirements; they do not have the ability to maintain air temperature and ventilation. In such cases, the silkworms that are cared for grow well in the bright areas of the room, again the general care is the same, but the cocoons being prepared are different. Heat and humidity control devices are rarely used during silkworm care. The existing devices are both spiritually and physically obsolete and they do not meet the demand. No company in the country produces devices that deliver and maintain heat and moisture to the required level. There are also problems with separating the finished cocoons from the stalk and removing the fluff from the top. Most importantly, before the cocoon is fully mature (2-3 days before maturity), the process of separating it from the stalk is very common.

At this point, the cocoon inside the cocoon does not have time to fully recover.

The cocoon may not be completely surrounded; the worm may not have fully penetrated the cocoon. As a result, the weight of the uncooked sponge is transferred to the weight of the cocoon. This reduces the cocoon

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quality and the coefficient of silk yield. Due to the lack of a device to determine the degree of maturity of the cocoon, the existing ones can not be accurately analysed. The degree of maturity of the cocoon is often determined after the cocoon has been collected and handed over to the preparation points. It is advisable to do the cocoon before picking it in the care area.

RECOMMENDATIONS

- Reduce the interval between removal of silkworms from seeds and their delivery to the place of care;
- Bringing cocoon production to the industrial level;
- Pay attention to the degree of maturity of the cocoon;
- Transportation of cocoons from the addresses of its manufacturers to the receiving points and further processing enterprises in special containers, using plastic containers with dimensions of 50x50x70 cm.

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