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## **THE IMPORTANCE OF AIR TEMPERATURE IN IMPROVING THE QUALITY AND DRESSING OF THE COCOON**

*This article discusses and analyzes the current state of cocoon growing in our republic and the main ways of its development, as well as analyzes the results of experiments to determine the effectiveness of the use of biophysical traps in the fight against mulberry moth. In the experiments, we used natural and artificial rubber impregnated with an antioxidant pheromone and 1 LED operating in the 1  $\mu\text{m}$  wavelength range. According to the analysis of the obtained results, it was noticed that there were 10 times more silkworm butterflies caught in illuminated pheromone traps than in non-lit traps, and the number of butterflies caught at night was about 11 times more compared to the number of butterflies caught at night. caught during the day. The purpose of this work is to analyze the factors affecting the quality and yield of the cocoon. Accordingly, the most essential part of the mulberry tree is its leaf, and when growing cocoons, it is considered the only food for the silkworm. Mulberry leaf contains sugar, protein, fat, water, enzymes and various vitamins necessary for the silkworm body. It has been researched that the timing of the mating of the Mulberry drugelis butterfly, which is causing the few in the mulberry leaf to decrease, depends on the heating of the obi-air. In this work, the factors affecting the quality and productivity of the cocoon were analyzed. Accordingly, the most important part of the mulberry tree is its Leaf, which is the only food for the silkworm in the cultivation of cocoons. The mulberry leaf contains sugar, protein, fat, water, enzymes and various vitamins necessary for the body of The Silkworm. It has been studied that the timing of the mating of the Mulberry drugelis butterfly, which is the cause of the decrease in the number of hairs on the mulberry leaf, depends on the weather warming.*

*Key words: trap, mulberry variety, hybrids, leaves, varieties, re-feeding, high-stamp plantations, mulberry yield, larvae, silk-separating gland, productivity, worm wear, and cocoon.*

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## **ВАЖНОСТЬ ТЕМПЕРАТУРЫ ВОЗДУХА ДЛЯ УЛУЧШЕНИЯ КАЧЕСТВА И ВЫДЕЛКИ КОКОНА**

*В данной статье рассматривается и анализируется современное состояние коконоделия в нашей республике и основные пути его развития, а также анализируются результаты экспериментов по определению эффективности использования биофизических ловушек в борьбе с тутовой плодовой жоркой. В*

экспериментах мы использовали натуральный и искусственный каучук, пропитанный антиоксидантным феромоном, и 1 светодиод, работающий в диапазоне длин волн 1 мкм. Согласно анализу полученных результатов, было замечено, что бабочек тутового шелкопряда, пойманных в освещенные феромонные ловушки, было в 10 раз больше, чем в неосвещенные ловушки, а количество бабочек, пойманных ночью, было примерно в 11 раз больше по сравнению с количеством бабочек, пойманных ночью. пойман в течение дня. Целью данной работы является анализ факторов, влияющих на качество и урожайность кокона. Соответственно, наиболее важной частью тутового дерева является его лист, и при выращивании коконов он считается единственной пищей для шелкопряда. Листья шелковицы содержат сахар, белок, жир, воду, ферменты и различные витамины, необходимые организму тутового шелкопряда. Было исследовано, что сроки спаривания бабочки шелковицы *drugelis*, из-за которых количество яиц в листьях шелковицы уменьшается, зависят от нагрева воздуха в помещении. В этой работе были проанализированы факторы, влияющие на качество и продуктивность кокона. Соответственно, наиболее важной частью тутового дерева является его лист, который является единственной пищей для шелкопряда при выращивании коконов. Лист шелковицы содержит сахар, белок, жир, воду, ферменты и различные витамины, необходимые организму тутового шелкопряда. Было изучено, что сроки спаривания бабочки шелковицы *drugelis*, которая является причиной уменьшения количества волосков на листьях шелковицы, зависят от потепления погоды.

Ключевые слова: ловушка, сорт шелковицы, гибриды, листья, разновидности, повторная подкормка, высокоштампованные плантации, урожайность шелковицы, личинки, шелкоотделяющая железа, продуктивность, износ червя, кокон.

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## **КОКОНДУН САПАТЫН ЖАКШЫРТУУ ЖАНА БӨЛҮП ЧЫГАРУУ ҮЧҮН АБАНЫН ТЕМПЕРАТУРАСЫНЫН МААНИСИ**

Бул макалада республикабыздагы коконоделдин азыркы абалы жана анын өнүгүшүнүн негизги жолдору каралат жана талданат, ошондой эле тыт мөмө жемиши менен күрөшүүдө биофизикалык тузактарды колдонуунун натыйжалуулугун аныктоо боюнча эксперименттердин жыйынтыктары талданат. Эксперименттерде биз антиоксидант феромон менен сиңирилген табигый жана жасалма резинаны жана 1 мкм толкун узундугунда иштеген 1 светодиодду колдондук. Табылгалардын анализине ылайык, жарыктанган феромондук тузактарга кармалган жибек куртунун көпөлөктөрү күйбөгөн тузактарга караганда 10 эсе көп, ал эми түнкүсүн кармалган көпөлөктөрдүн саны түнкүсүн кармалган көпөлөктөрдүн санына салыштырмалуу 11 эсе көп экени байкалган. күнү бою кармалган. Бул иштин максаты Кокондун сапатына жана түшүмдүүлүгүнө таасир этүүчү факторлорду талдоо болуп саналат. Демек, тыт дарагынын эң маанилүү бөлүгү анын жалбырагы жана пилла өстүрүүдө жибек куртунун жалгыз азыгы болуп эсептелет. Туттун жалбырактарында кант, белок, май, суу, ферменттер жана жибек куртунун организмине керектүү ар кандай витаминдер бар. Тыт жалбырактарындагы жумурткалардын санын азайткан тут көпөлөгүнүн жупташуу убактысы үйдүн ичиндеги абанын ысышына байланыштуу экени изилденген. Бул эмгекте Кокондун сапатына жана өндүрүмдүүлүгүнө таасир

*этүүчү факторлор талданган. Демек, тыт дарагынын эң маанилүү бөлүгү анын жалбырагы болуп саналат, ал пилла өстүрүүдө жибек куртунун жалгыз азыгы болуп саналат. Тут жалбырагында кант, белок, май, суу, ферменттер жана жибек куртунун организmine керектүү ар кандай витаминдер бар. Тыт жалбырактарындагы түктөрдүн азайышынын себеби болгон тыт көпөлөгүнүн жупташуу убактысы аба ырайынын жылышына байланыштуу экени изилденген.*

*Негизги сөздөр: тузак, тыт сорту, гибриддер, жалбырактар, сорттор, кайра Азыктандыруу, жогорку штампталган плантациялар, тыт түшүмдүүлүгү, личинкалар, Жибек өткөрүүчү Темир, түшүмдүүлүк, курттун эскириши, кокон.*

**Introduction.** Although our republic is among the top five countries in the world for the cultivation and processing of cocoons, it lags behind China, India, Korea and a number of other countries in terms of the quantity of cocoons and raw silk produced, as well as quality indicators. [1] one of the main reasons for this is that the cultivation of cocoons by Silk clusters and cocoon farms has not yet been carried out on a full-fledged industrial basis, new Mulberry plantations are being created, there is not enough attention to research on the care of mulberry trees and the allocation of the nutritional properties of mulberry leaves, as well as the impact The benefits provided for by paragraph 1 of the decree of the president of the Republic of Uzbekistan No. 5587 of November 29, 2018 "on measures to further stimulate the export potential of domestic producers" will also be applied to the products of raw silk (TIF TN code 5002) and Silk fluff (TIF TN code 5003) until January 1, 2021. In this case, the funds that will be released as a result of the application of benefits will be purposefully directed for the modernization of production, including the purchase of technological equipment; The procedure for providing compensation provided for by paragraph 5 of the decree of the president of the Republic of Uzbekistan dated December 4, 2018 "on additional measures to support the rapid development of the cocoon network in the Republic" No. 4047" is applied for the purposes of providing compensation for the cultivation of cocoons regardless of the value and number of projects, including extended. Association "uzbekipaksanoat": enterprises that are part of the Association "Uzbekipaksanoat" in the regions organized regular monitoring on the full implementation of forecast indicators for the planting of Mulberry seedlings, the cultivation of silkworm seeds and cocoons, deep processing of cocoons, export of deeply processed products from silk, silk fiber and Silk, attracting investment and creating new jobs. Proposals were made to the Cabinet of Ministers of the Republic of Uzbekistan to revise the benefits granted to enterprises that are part of the Uzbekipaksanoat Association, which allows the slowness in providing the established indicators for the planting of Mulberry seedlings, the construction of silkworm care facilities, the organization of Cocoon cultivation and its deep processing. implementation and creation of export of silk products [2]

**Literature review.** From year to year, the demand for a high-quality and bountiful harvest of mulberries is growing in our republic by subverting mulberries in innovative methods, following the rules of agrotechnics in the care of mulberry trees or special mulberries in specialized farms and family contractors. Accordingly, the most significant part of the mulberry tree from the farm ground is its Leaf, and when growing cocoons, it is considered the only feed of The Silkworm. In addition to the presence of sugar, protein, fat, water, enzymes and various vitamins necessary for The Silkworm organism in the composition of the mulberry leaf, the mulberry tree, when planted mixed with other trees, also acts as an ixota in protecting crops from the effects of garmsel and cold winds. As you know, now there are more than 200 varieties of Mulberry. [3] Among them are varieties created by breeders of the Republic, brought from the Commonwealth and far abroad. Hence, Mulberry is one of the perennials in terms of variety and hybrid and differs from other plants in terms of

leaf yield and biochemical composition of leaves. Selection methods are used, and the created Mulberry varieties usually fully meet the demand due to the fact that they have high yield characteristics. However, today the use of hybrids in production in terms of leaf quality and saturation has shown great results in subsequent years. On this, many years of experiments were carried out on the reproduction of Mulberry from a pen and achieved good results. K. R. The second yiliak Leaf can be used to feed silkworms if a bush incense is established in the Mulberry pen in the method recommended by rachmonberdiev (1997) In this case, it is possible to obtain from 1 hectare of mulberries 3-4 tons in the first year, 6-7 tons in the second year, 8-10 tons in the third year and up to 10-15 tons of varietal mulberry leaves in the following years. When grown from seed, it will take 5-6 years to build a bush and use the first leaf, or even in 10-15 years, 10-15 tons of leaf crops cannot be grown from these mulberries. In this case, 5-6 tons of Leaf dressing can be obtained if high agrotechnics are applied. At the end of his research, the author notes that due to the fact that cuttings are made mainly from varietal mulberries, their leaves have a high viability compared to silkworms fed with mulberry tree leaves, bred from seed, due to the fact that they are nutritious, the yield of cocoons obtained from a box of worms will be higher than 7-9 kg. Climate change can affect insects, as climate change is one of the main factors in pest population dynamics, requiring flexible management strategies to overcome the changing state of pests. Several priorities can be identified for future studies of the effects of climate change on agricultural insect pests. These include modified integrated pest control tactics, climate and pest population monitoring, as well as the use of modeling forecasting tools. [7]

When conducting our experiments, scientists of the Scientific Research Institute of silk industry of Uzbekistan created, Markhamat 2017, using the varieties of Uzbekistan, Andijan region Izboskan District Azamjon Tajiakhmedov conducted experiments on a cash farm specializing in silk production. As a comparative option, in places where the biophysical handle is installed, the degree of mulberry leaf damage has sharply decreased, compared to places where it is not installed, 70-85% mulberry leaf feed damage has been preserved from the worms of the Mulberry propeller butterfly.

**Research methodology and empirical analysis.** The study was conducted by Alisher Mamatov, a native of Andijan region of Altynkul agrropilla, on the 2-hectare mulberry plantation of the cash farm 22.08 - 27.08.22. This study, designed to protect mulberries from pest flying insects, used an “innovative biophysical grip device” developed by scientists from the Andijan Machine-Building Institute. The device was installed on the designated triplets of the mulberry plantation. The studies were carried out under the same conditions at intervals from 19:00 to 05:00, and the results below were obtained. [4]

Table 1

Types and number of hshort caught

| № | Trap name         | Types and number of hshort caught (PCs) |                       |                            | Days of experimen tation | Time spent experimentin g |
|---|-------------------|---|-----------------------|----------------------------|--------------------------|---------------------------|
|   |                   | Mulberry propeller butterfly            | Fig parvona butterfly | Heat level of the day      |                          |                           |
| 1 | Biophysic al trap | 24                                      | 18                    | 29 C daytime<br>17 C night | 22.08.22                 | From 19:00<br>Until 05:00 |
| 2 |                   | 58                                      | 25                    | 30 c daytime<br>18 C night | 23.08.22                 | From 19:00<br>Until 05:00 |
| 3 |                   | 122                                     | 50                    | 30 c daytime<br>17 C night | 24.08.22                 | From 19:00<br>Until 05:00 |
| 4 |                   | 176                                     | 68                    | 30 c daytime<br>22 C night | 25.08.22                 | From 19:00<br>Until 05:00 |
| 5 |                   | 153                                     | 72                    | 29 C daytime               | 26.08.22                 | From 19:00                |

|   |        |     |     |                            |          |                           |
|---|--------|-----|-----|----------------------------|----------|---------------------------|
|   |        |     |     | 19 C night                 |          | Until 05:00               |
| 6 |        | 106 | 85  | 30 c daytime<br>16 C night | 27.08.22 | From 19:00<br>Until 05:00 |
|   | Total: | 639 | 318 | Every day                  | 6-day    | Every day                 |

As can be seen from the table, on hot days of the night, the excitation of volatile harmful insect's increases with increasing breeding conditions. Therefore, the installation of a biophysical handle should be put on more hot days of the night, it is easy to break the pest flying insects and gives a high effect.

**Results** Based on the results obtained, the following conclusion can be drawn. Mulberry propeller worms are the main pest that sharply reduces leaf yield, and the new STEM negatively affects the growth ravine, which can lead to a decrease in its growth by up to 45-50 centimeters. The results of the study show that the increase in pest insects significantly negatively affects the yield of Cocoon clusters. The use of chemical methods against them depends on the daily temperature, and on hot days, the glow of chemical reagents does not sufficiently affect the pest insects. Also, the polishing process is harmful to health, causing chemical reagents to spread to the environment.

1. The application of the "Innovative biophysical grip device" in the fight against pest insects depends on the daily temperature, and on hot days it was found that the pest has a high destruction of insects, and is 70-85% effective against chemical processing. Also, the application of the device is environmentally friendly, which is characterized by the fact that various chemical reagents are not used in it. In this regard, we note that the application of the "innovative biophysical interceptor device" developed by scientists of the Andijan Institute of mechanical engineering may allow us to create an environmentally friendly system for the introduction of effective and harmonized measures in the agricultural sector in our Republic, in particular, against pests of agricultural crops, increase the efficiency of agricultural crops due to. The results showed that on hot days of the night, the excitation of volatile harmful hazards increases with increased breeding conditions. Therefore, the installation of a biophysical handle is more necessary to put on hot days of the night pest flying insects are easy to scrape off and give a high effect.

2. The biophysical handle holds up to 176 Mulberry propeller butterflies per day which means that up to 88,000 worms are eliminated if each butterfly lays 500 eggs. 30 days at the time of mating butterflies will destroy 2,640,000 worms if the handle is installed. 1 hectare of ground mulberry leaf feed 6 tons will be obtained if not damaged 180 kg of this feed cocoon dressing will be saved as a result of which 5,400,000 sum of funds will be economical. The tutors of the Andijan region now occupy 5 thousand hectares, which we will achieve in the economy of large sums if we consider this in our Republic.

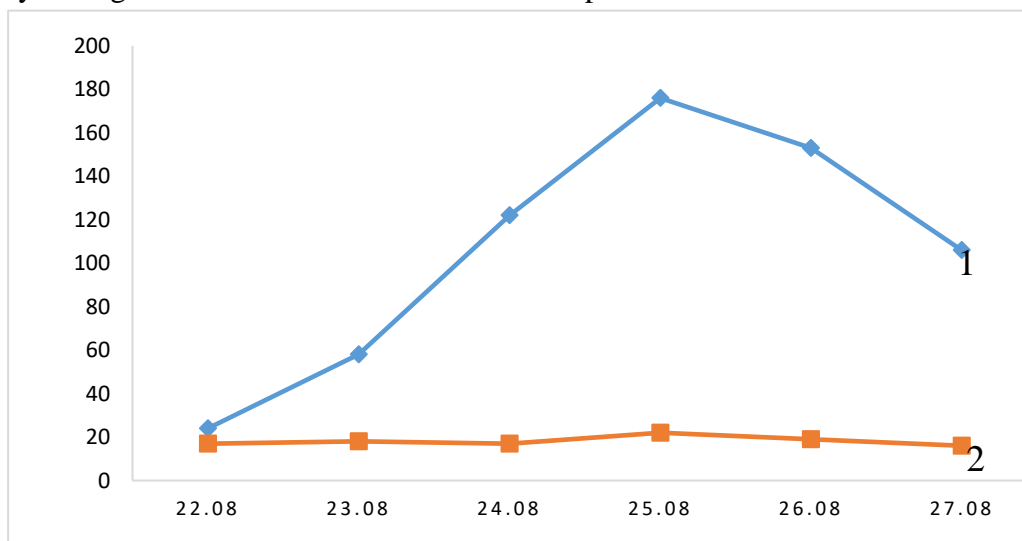


Figure 1. Holding a Mulberry propeller butterfly in the Cross of days (1) and daily temperatures (2).

**Conclusion and discussion** In conclusion, Mulberry parvona butterfly worms the first stage silkworm of cocoon type damages the feed base by 85-90%. In mulberry trees affected by Mulberry parvona, the stem length is reduced by 34.7%, and the number of leaves on each branch is reduced by an average of 36.3%; the weight of one leaf is reduced by 0.5 grams, that is, by 34.5%. In addition, when damaged trees are re-bruised, the branches dry out during the winter, the affected branches have a decrease in leaf quality, as well as the drying out of severely damaged trees for several years in a row. In addition to the presence of sugar, protein, fat, water, enzymes and various vitamins necessary for The Silkworm organism in the composition of the mulberry leaf, the mulberry tree, when planted mixed with other trees, also acts as an ixota in protecting crops from the effects of garmsel and cold winds. According to agropilla chief agronomi Mamatkhonov Alisher of Andijan region, mulberry plantation is 5 thousand hectares in the region, Mulberry seedlings are 16 million tubers, 6-million high-bodied mulberries, 10-million young mulberries. From 1 hectare of mulberries, up to 6 tons of leaf feed are obtained, while 1-karopka is 19-grm, up to 1200 kg of leaf feed are fed. In this case, 40 kg of cocoons are obtained, while 1 kg of cocoons are delivered from 30 thousand soums. In this case, if there is 100% feed Leaf at 1200 kg, there will be 90% damage that is equal to  $X_{kg} = 120$  total 300 kg leaf feed mold if 10 kg cocoon is taken from 1 silkworm, there will be 300 thousand soums, if 40 kg, there will be 1,200,000 soums so that 900,000 soums of economic damage is done he has a great authority in improving his character and improving the quality of Cocoon fiber.

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