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TEMPERATURE CONDITIONS OF STORAGE OF GRENA

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Abstract:

The article highlights the role and place of sericulture in the national economy of the Republic, about its ways of further development, about the role of grain production, about the technology for preparing grena, about the conditions for its storage at different stages of development and about its consequences in case of violation of its content in pedigree sericulture stations and grenage factories.

Keywords: sericulture, factors, grena, breed, hybrid, silkworm, farms, pedigree sericulture station, pedigree rearing, temperature, humidity, aeration, aestivation, biological indicators.

Sericulture is one of the leading sectors of the agricultural sector of the Republic of Uzbekistan, it will play an important role in the socio-economic life of people and provide industrial enterprises and other sectors of the national economy with valuable raw materials. According to historical data, since the 4th century AD, the peoples of Uzbekistan have been engaged in sericulture, during this time, for various reasons, both the rise and fall in the production of mulberry cocoons were observed. Despite all this, today our republic is in the forefront in terms of production, and is in third place in the world after China and India. Also in recent years, there has been a steady rise in the production of silk cocoons and raw silk with a noticeable improvement in their quality.

And constant stability in the industry is ensured with the help of many factors, one of them is the production and preparation of grena of local breeds and silkworm hybrids, to fully meet the needs of farms, dekhkan farms and sericulture clusters of the republic. Unfortunately, the share of local grena in the provision of sericulture in recent years is about 35-40 percent, the remaining part is imported from abroad and creates certain difficulties in obtaining high-yield and high-quality cocoons.

Therefore, the silkworm breeders of our Republic are faced with a big task, so that in the coming years the needs of the republic for silkworm grenade are fully provided with grains of local origin, more adapted to local conditions. To do this, it is necessary to use all the available capacities for the preparation of breeding and industrial silkworm eggs in the Republic, that is, breeding sericulture stations and grenage backwaters must work at full capacity. Of course, in order to solve this important issue, highly qualified silkworm breeders of the grenage direction are also needed.

Graining is understood as the whole set of technical methods and labor processes necessary for the preparation of high-quality grena. A high-quality grena is considered to be grena that revives well during incubation, giving healthy worms when revived - free from pebrin, strong, not prone to diseases and able to withstand the effects of various possible adverse conditions well, giving correct, well-formed cocoons during curling.

The first condition is achieved by the organization of breeding rearings and the cellular grenage method; the second condition is achieved by the organization of pedigree rearing and culling during grenage of lots of cocoons that are largely affected by diseases; the third condition - obtaining good cocoons when feeding grena - is achieved by the right choice of silkworm breed and selection.

During each period of its life, grena should be stored at the most suitable temperature for this period; if grena is stored at too high a temperature, then as a result, the processes of respiration intensify in it - grena will lose a lot of matter and energy and, as a result, will weaken or die; stronger than others, and such a violation in the coherence of processes can again lead to the weakening or death of the grena.

Since during the life of grena the intensity and course of the processes occurring in it are different, then during each period grena should be stored at the most suitable temperature for individuals.

Studies have established that during the summer-autumn or estivation period, the storage temperature of grena should be quite high +22 +25 0C in the first days of life, with a gradual decrease to 12-140C at the end of the summer-autumn period, if in the storage facility during this period temperature threatens to drop below the specified

temperature, then the storage facility must be heated to raise the temperature in it to 12-140C. If, on the contrary, grain is stored at a lower temperature during the summer-autumn period, then, as experience shows, its yield will decrease significantly and its quality will deteriorate.

All biological processes in gren are continuously carried out in the environment of external atmospheric phenomena, such as aeration, temperature and air humidity. Thus, the issue of grena storage is reduced to the creation of a set of environmental conditions that ensure the correct development of internal processes occurring in the egg.

After papillonage, grenae masonry is stored together with butterflies in insulating bags, in boxes or on beds; after microscopy and control, it is stored in frames or 200 g bags in gren storages. The vital activity of grena does not remain constant. There are three periods in the development of grena of monovoltine rocks: the first - the embryo is formed within two to three days at a temperature of 24-260C; the second period, characterized by the cessation of the development of the embryo (diapause), ends in the spring of the next year; the third is the period of spring development of grena, begins in spring and ends with the emergence of caterpillars.

The summer-autumn period of grain storage (estivation) should take place with a constant decrease in temperature. From the beginning of papillonage until September 1, 22-250C at 60-70% humidity. In September 25-200C, in October 22-170C, in November before washing, 17-120C at 60-70% humidity, during washing and after it 11-120C at the same humidity. Aestivation conditions have a great influence on the revival of the grain and the viability of caterpillars.

Wintering of grena usually lasts 120 days, and for late spring rearing up to 140 days, with prolonged wintering, the liveliness of grena and the viability of caterpillars decreases. Wintering begins no later than December 1, during preparation for it, the temperature is reduced daily by 1-20C. Wintering is carried out at a temperature of 2-40C above zero and a humidity of 60-70%.

Grena is stored in special chambers equipped with refrigeration units. Cassettes, boxes or frames with grena are placed on whatnots, standing no closer than 0.5 meters from the walls. During wintering, ventilation is performed at least three times daily, temperature and humidity are measured four times. Corrects them if necessary. At the beginning of wintering, the embryo should be in the second stage of its development, and at the end of wintering in the fifth. To ensure the normal storage of grena in all its stages, it is necessary to have special facilities with appropriate fixtures and equipment.

Thus, environmental factors, especially the temperature regime of grain storage, play a special role in their biological indicators, such as the percentage and friendliness of the revival of grena, the viability of caterpillars, the duration of the caterpillar period, palatability and digestibility, and, in total, the yield and quality of cocoons. All this increases the attractiveness of the sericulture industry, the material interest of sericulture and the competitiveness of raw silk and silk goods in the foreign market, which ultimately ensures the stable and progressive development of the industry in the republic.

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