

DIFFERENTIATING THE POPULATION OF SILKWORM BUTTERFLIES BY LIFE EXPECTANCY

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Abstract

The topic describes the selection of the silkworm and its role in the development of the industry, the favorable object of the silkworm in breeding work, the correlation of the main economic valuable characters with the life expectancy of female butterflies, the activity of especially biological indicators and conclusions.

Keywords: Selection, phenotype, genotype, system, breed, biology, correlation coefficient, correlation coefficient, correlation, tut silkworm, vitality, productivity, reproductive indicator.

Introduction

The sericulture sphere plays a great social and economic role in the economy of the Republic, at the same time it takes a special place to provide the textile industry enterprises with natural silk raw materials. Therefore, several resolutions and decrees of the President and the Government of the Republic have been adopted on the development of the silkworm sector, which serve as a program for strengthening the nutritional base of pillage, localization of silkworm seeds, increasing the volume of cultivated pills and improving its quality.

It has been more than 5,000 years since the silkworm has been domesticated and used for human purposes, during which time it has been unconsciously selected by man by selecting according to its phenotypic external characteristics. It can be said that over the next 200 years, the selection of the silkworm is carried out on a scientific basis, studying the correlation of traits with the aim of increasing its main productivity and reproductive indicators.

Mulberry silkworm is a favorable object for scientific research in terms of its fattening, care and rapid reproduction, therefore, several problems of extremely important genetics in this pocylic and monophage insect have been solved. In particular, our studies were carried out to differentiate populations in terms of life expectancy and, on its basis, increase the main biological indicators, as well as farm valuable markers in the next generation.

Determining the life expectancy of female silkworm butterflies and the degree of their coexistence with other selection traits is of great importance for the practice of genetics and selection.

[1] established coefficients of variability of fertility traits of some breeds: $S_v = 5.0-31.5\%$ egg-

laying weight in SANIIS8 breeds; $S_v = 1.5-26.5\%$ in the Saniish 9 breed; $S_v = 2.0-52.0\%$ in the SANIISh EP breed.

Based on these coefficients of variability, the author gives an estimate of the egg-laying of breeds to the degree of uniformity.

[2] He found that the Azad and Gyandja breeds depend on the intensity of selection differentials based on variability in the number and weight of eggs in the egg laying.

Et al. [3,4] have investigated on a large scale the variability of beetle fertility traits in superelite and elite populations of the Fergana breeding station for several years. As a result, a mechanized method of gross selection under the silkworm silkworm was developed.

The biological indicators of Orzu, Guzal, Pearl, Asaka breeds proved the existence of a similar interbreed tendency [5] in terms of animation, imaginability, weight of brood and bulb shells of worms [5]. Hybrid hybrids with bivoltine properties have been proven by feeding "Orzu X Bivoltin 99" and "Yulduz X Bivoltin 99" hybrids in summer [6].

In order to accomplish the goal, the generation egg layings obtained according to the life span of the females of the Line 66, Line 67 systems, in which the sex of the worm was marked, were divided into 3 gradations (group). Gradations of breeds are framed as follows:

butterflies of grade 1, which lived 9-15 days;

butterflies of grade 2, which live for 7-8 days;

Grade 3 butterflies that live for 1-6 days.

On these gradations, an average of 3-4 egg layings were combined and egg mixture was bred.

Any method of selection in the breeding and breeding work of the silkworm must have a scientific basis. If the correlation between the life expectancy of the females we study and the leading selection traits is established, it will be possible to include in the selection program for the life expectancy of females butterflies aimed at increasing valuable traits of a particular farm, as a result of which an increase in the efficiency of selection work will be achieved.

Based on the above considerations, prior to the 2017 spring worm feeding season, 100 eggs were counted in 3 replacements from the egg mixture according to the gradations of Line 66, Line 67. The egg samples for the incubation process were put into resuscitation in parallel with the main fattening eggs to determine the indicator of revival.

By determining the number of non-revived eggs in the revival samples, the percentage of revival of eggs was calculated.

By gradations, the revitalized worms were raised for care, and feeding them under the same hygrothermic conditions and with the same quality of mulberry leaves was organized. On Day 1 of the 2nd year of worms, 250 worms were counted in 3 repetitions from each gradation, and the worms were delivered to the pulp wrapping. After the worms had been surrounded by pills, the pills were divided into healthy, supplementary, deaf and scab groups in order to determine their viability. The viability of worms was determined by calculating the proportion of healthy grunge pills in the total pills. Also the percentage of worm incidence during the period of worm fattening has also been determined. Table 1 contains indicators of vitality and vitality.

Table 1 Egg revitalization of breeds and potency of worms (Spring 2018)

Breed and systems	Life expectancy of butterflies, 24 hours	Egg revival, % $\bar{X} \pm S \bar{x}, \%$	Worm viability, % $\bar{X} \pm S \bar{x}, \%$	Disease percentage $\bar{X} \pm S \bar{x}, \%$
Line 66	6.2±0.895	96.3±0.48	91.4±0.23	4.3±0.38
Line 67	6.25±0.66	96.3±0.48	87.2±0.69	5.2±0.12

As can be seen from the data in the table, the percentage of egg revival, the life expectancy of female butterflies, recorded the highest in the Line 66 and Line 67 systems (6.2 and 6.25 days, respectively), i.e. 96.3%. On the other hand, we can see that the survival rate of worms was 91.4% in the Line 66 system, while the lowest rate in this regard was recorded in the Line 67 system of 87.2%. In terms of disease resistance, the best indicator was observed in the Line 66 system.

In conclusion, it can be said that by studying the life expectancy of female butterflies, it is possible to continue the study in the later stages of the study, choosing the systems and breeds in which the eggs of their offspring are highly viable, the viability of the worms is strong and at the same time resistant to diseases.

References

1. Safonova A.M. Prichiny izmenchivosti i puti povysheniya odnorodnosti kokonov v semyax i partiyaх pri selekcionno-plemennoy rabote s tutovym shelkopryadom//Nauch. tr. SANIISH.-1973.-Вып.8.-S. 19-27.
2. Abbasov B.G. Seleksionno-geneticheskie parametry osnovnykh khozyaystvenno poleznykh priznakov tutovogo shelkopryada: Avtoref. dis... kand. s.x. nauk.-Tashkent, 1978.-24p.
3. Nasirillaev U.N. Izuchenie zavisimosti selekcionnykh differentsialov ot intensivnosti otbora //Shelk.-1969.-N1 .-S. 12-13.
4. Nasirillaev U.N. Geneticheskie osnovy otbora tutovogo shelkopryada (mnography).- Tashkent: Fan,1985.-S.2-9
5. Jumaniyazov M. Breeding of worms of paternal and maternal breeds during the breeding season for the purpose of preparing eggs for repeated worm fattening. Zoovetrenary. - Tashkent, - 2010. No. 1. pp. 37-38.
6. Performance indicators of repeated worm feeding of hybrids of Umarov Sh. Bivalent breed. Zoovetrenary. - Tashkent,- 2010. No. 3. pp. 29-30.