



საქართველოს სოფლის მეურნეობის
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GEORGIAN ACADEMY OF
AGRICULTURAL SCIENCES

RECOMMENDATION

CENTRALIZED FEEDING IN THE FIRST TWO AGE OF THE MULBERRY SILKWORM AND ITS ADVANTAGE OVER THE INDIVIDUAL FEEDING



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Introduction

According to the agrarian rules of sericulture and silk production, in order to provide adequate conditions for better care, growth and development, reduction of the length of feeding, and maintenance of the cocoon in each stage of sericulture, it is advisable to keep the cocoon in a warm environment.

In the 1950 s, feeding of the number of silkworm , (approximately 50 boxes), was known as “feeding in a warm room”, since 1960 s the same process is called as “centralized feeding”.

Feeding of silkworm in a centralized form is very interesting, complicated, but economically justified process; It requires application of verified administration and management methods. Until the 1990s, the regional and central administration was working properly; there were public plantings and the teams of workers (so called “brigades”) also the reimbursement/payment to the workers was well-adopted to the system of centralized feeding. Still, the organization of the centralized feeding was rather complicated even during that period.

Today, on the first stage of the field rehabilitation, when there is no public feeding base, and neither administration nor work reimbursement systems have been worked out yet, the centralized feeding should be addressed with great care.

To start with, regional and central administrative organs (regional co-operatives) should be set up, later, we should pay attention to organization of centralized feeding.

Launching of the live silkworms to the silk-producers always incurs significant losses, but when the silkworm is delivered after two stages (the second or the third day of the 3rd stage), the losses of silkworms are reduced to the minimum.

When the silkworms are transported from incubating cameras to the private apartments of the farmers, they find the new environment rather inconvenient. It is fairly difficult to maintain the proper conditions- necessary temperature and moisture in private apartments, therefore, it causes drawbacks in the development process of the silkworms, and in some cases even their death.

Centralized feeding is necessary to select a bright and dry home heating means, where the multiple shelves are placed (It is recommended to be used the construction of the Research Institute of Sericulture, where the feeding shelves have automatic regime of getting rid of excrements) Fig. 1, Feeding should be provided with relevant equipment and must be carried out strict disinfection.

Centralized feeding should be conducted under the direction and supervision of a specialist.

For centralized feeding when transporting of silkworms from incubating cameras we should use cardboard or plywood boxes with holes; In time of placement in the boxes it should be sprinkled chopped mulberry leaves above the silkworms. It should also be noted that one of the advantages of centralized feeding is that during feed preparation it can be used small mechanization facilities – machines removing leaves from branches and cutting machines. (fig 1.)



A.



B.



C.



D.

fig. 1. A- Device for feeding young silkworms;
B - machines removing leaves from branches
C – Leaves cutting machine;
D – Cut leaves.

Co-development of silkworms and mulberry trees is often characterized by unstable weather conditions due to which it is necessary to stop the development of

silkworms. It may be reached by having the temperature 21-22⁰ and feeding regime reduction; and sometimes the opposite is necessary to speed up the worm's growth and development, for which the required temperature reaches 25-27⁰ and increasing of feed regime. Thus we can obtain co development of silkworms and leaves, which is an important condition for obtaining a high yield of the cocoon.

During centralized feeding, in the first two years one man can take care of 4-5 boxes of silkworms (one box contains 19 grams of silkworms). Whereas in family farms one person provides 6-10-12 grams of silkworm feeding, this leads to an increase of expenditures.

In conditions of centralized feeding main attention should be given to the relevant management of labour, establishment of cooperatives and the distribution of domestic work properly. In cooperatives neighbouring silk farmers should be united and the manager will be appointed. Members must be informed about centralized feeding principles and they should be trained in seminars organized periodically (it is recommended that agricultural information and consulting centres conduct workshops and seminars where agricultural specialists and scientists will be involved actively).

Considering existing situation of feed base for taking care of silkworms in its first two age and for leaf preparation it is needed to select one person on 4-5 boxes to deal with such activities , and from the third age one more person may be added to deal with leaf preparation and other related activities.

During centralized feeding process worms must be placed on separate shelves according to their number. Specialist will give it special number and will make notes in journal where the name of silk farmer will be written.

The air temperature in silkworms feeding room should be 25-27⁰, humidity of air 75-80%, food should be given 5-6 times a day in the cut form. For feeding it should be used finely chopped mulberry leaves. The food is better to be prepared in the evening, allowed the morning hours as well. The leaf should be stored in baskets or other containers under the wet cover. It is prohibited to use the chopped leaves another time.

Excrements should be removed once at the beginning of the second age, on the day after the skin change. and on fourth day of third age.



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