STATE OF THE ART AND PROSPECTS OF DEVELOPMENT SERICULTURE IN UZBEKISTAN

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THE REPUBLIC OF UZBEKISTAN

- ***The Republic of Uzbekistan is a dry country in Central Asia with continental climate. Less than 10% of its territory is intensively cultivated, irrigated land in river valleys and oases. Total area - 447,400 km2. Population- 2012 estimate 29,559,100.***

IMPORTANCE OF MULBERRY SILKWORM

BOMBYX MORI L. FOR HUMAN BEING

- Being a monophagous mulberry silkworm *Bombyx mori* L. as opposed to other agricultural animals entered into agriculture history with its fodder plant – mulberry tree *Morus alba* L. As a result of human activity these both biological species presenting bases of modern sericulture were significantly changed in comparison with their wild species. So sericulture can be refer to traditional biotechnological manufactures along with crop growing, livestock farming, bread baking, cheese, vine making and other similar ancient manufactures.
- It will be noted that importance of these species for mankind is connected not only with sericulture. Last years they are considered as efficient producers of plant and animal organic raw material of folk consumption: for food and pharmaceutical industries, as model animal and highly sensitive biosensors in life-sciences and environment screening including space and zones technogenic catastrophes, for education as well as outstanding candidates capable to provide human life in the space and at alien settlements of astronauts.
- In spite of achievements in mulberry growing, sericulture and mechanization of the branch silk production traditionally remains a season cottage industry depending on skill of individual rearers, on climatic conditions, on diseases and pests of mulberry trees and mulberry silkworm.

ANCIENT HISTORY OF UZBEKISTAN SERICULTURE

Uzbekistan sericulture has its more then 3500 years history, original ways its development, revival and progress.
To correct understand present-day situation and not simple development of this branch it is necessary to look back to history of beginning, survival and development of sericulture by the example on present-day territory of Central Asia and in particular of Uzbekistan.

Uzbekistan sericulture has its long-standing history, distinctive development, rather fast period of development particularly during last 100 years and supports scientific search for ways of its intensification and progress. Being at the middle of the Silk Road between East and West it not only manufactured and sold its original silk goods but also absorbed last achievements of silk craft and culture generally.

HISTORY OF UZBEKISTAN SERICULTURE

- Sericulture in Central Asian region was spread by Chinese quite early. But endless wars had as after-effect almost total liquidation of this craft which was preserved only in Merv oasis. In 1785 Bukharian khan Shamuradbeck captured almost all population of Merv and settled them near Bukhara and Khatyrcha. They were engaged in sericulture and silk processing and taught sericulture to other habitant of Bukhara from where sericulture was spread in Turkestan again.

UZBEKISTAN SERICULTURE IN RUSSIAN TURKESTAN

- Development of whole sericulture branch got serious impulse when in 1865 Turkestan joined to Russian empire. A new branch of industry arisen with creation of silkworm eggs breeding stations. This branch lead out Russia on the third place in the world by production of high-quality and healthy silkworm eggs. Generally in Turkestan by 1917 a silk industry was on the third place among other branches of industries.

UZBEKISTAN SERICULTURE IN SOVIET PERIOD

- Later a sericulture got intensive development already at Soviet period. From these examples it can be seen how wisdom of some historical persons and correct politics of the state could lead both to preservation and acceleration of industrial production. This is important for revival of sericulture in states which recently lost this branch when ecology and socio-economics favor to this.

- So Uzbekistan historically was formed as favorable region for productive manufacture of cocoons, raw silk and silky goods taking into account climatic conditions, hard-working and educated population, well developed scientific and technical potential. Scientific Council on coordination of all R & D in the former USSR was at SANIISH – Middle Asian Scientific Research Institute of Sericulture formed in 1927 in Tashkent.

UZBEKISTAN SERICULTURE IN SOVIET PERIOD

- Academicians Astaurov B.L. and Strunnikov V.A., professors Slonim M.I., Efraimson V.A., Belyaev N.K., Poyarkov E.F., Mikhailov E.N., Nasirillaev U.N. and many other scientists worked and made their discoveries here. Their followers continue these and develop modern directions in Uzbekistan. Contribution of these scientists to Uzbek and World sericulture is well known. Sericulture in Uzbekistan in those years had a great importance both civil and defense branch. They promoted to development, preservation and revival of genetics and selection work, eggs production, control diseases and pests, to train of highly qualified professionals, to stimulate now R&D in new directions such as molecular biology, bio- and nanotechnology.

UZBEKISTAN SERICULTURE AFTER COLLAPSE OF THE USSR

- Uzbekistan after collapse of the USSR integrated in international community became fast develop. Certainly there are temporary growing difficulties during reorganization period and due to economic crisis. Initially observed fall (till 18-20 thousands Mt in 2000-2005) gave way to partial recovery of cocoons production (till 25 thousands Mt in 2010-2012) because of correct investment policy (more then 10 Orders and Decrees of the President and government of Uzbekistan). Last Order of the Cabinet of Ministries (December 2012) is particularly significant. It was given a directive to build in agricultural regions 196 specialized factories for centralized silkworm rearing of 50-100 boxes of eggs with present day facilities for operating personnel.

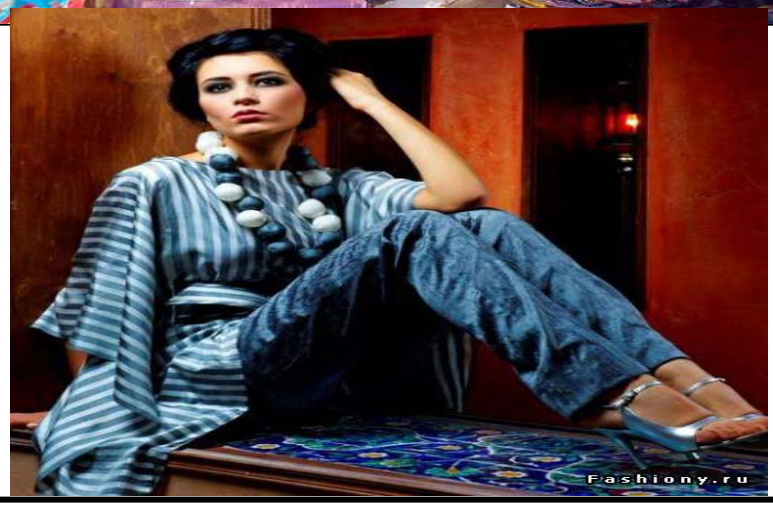
PRESENT DAY SITUATION IN SERICULTURE OF UZBEKISTAN

- At the present transition period initially observed falling-off in cocoons production (till 18-20 thousands Mt in 2000-2005) gives way to partial recovering of volumes (till 25 thousands Mt in 2010-2012) due to correct legislative and investment policy of Uzbekistan government.
- In Uzbekistan scientific R&D works directed on replacement of temporary bought foreign silkworm eggs to local new hybrid eggs, on development of strains and hybrids and methods of their breeding oriented for silkworm rearing in summer and autumn seasons, on improvement of pedigree work, on reconstruction of egg production and centralization of rearing technology, on utilization of unused today resources of mulberry growing and sericulture for manufacturing of new goods, especially with application of biotechnologies are continued.
- Thereby at present the Republic succeeds to get a yield in 25 thousands tons in spite of temporary difficulties. Forward-looking and reasonable state and international politics of investments to the silk industry will allow get and increase before reorganization level of cocoons and raw silk production, to expand silk products assortment including high-tech products relatively soon.

UZBEK SILK PROMOTION

- Every year there are international exhibitions where Uzbek silk and sericulture products are represented. For example this year we have two exhibitions:
- 1. AgroExpo Uzbekistan 2013, Date: 14-16-MAY-13. City: Tashkent. 2nd international specialized exhibition "Agricultural machinery. Agricultural products" - "AgroExpo Uzbekistan 2013", Venue: Uzexpocentre, Site of the organizer: www.zarexpo.com
- 2. Textile Expo Uzbekistan 2013. Date: 11-SEP-13 to 13-SEP-13. City: Tashkent. 10th Central Asian International Specialized Exhibition - "Textile Expo Uzbekistan 2013". Venue: Uzexpocentre. Site of the organizer: www.ite-uzbekistan.uz.

UZBEK SILK DESIGN



PROSPECTS OF DEVELOPMENT OF SERICULTURE IN UZBEKISTAN

- To continue the course of state and foreign investing in silk branch.
- To continue tendency to material interest of farmers. To stimulate transition of manufacture to centralization on the scientifically based biotechnics of industrial sericulture.
- It is necessary to arrange courses of unified sericulture with application of present-day R&D achievements of silk manufacturing for farmers-beginners.
- To arrange cooperation and sharing of experience with progressive sericulture countries with similar climate.
- To develop new mulberry sorts and hybrids with high productivity and nutritional value and new local silkworm breeds and hybrids with high technologic parameters of cocoons similar to international standards.

PROSPECTS OF DEVELOPMENT OF SERICULTURE IN UZBEKISTAN

- To continue reorganization silkworm seed plants to produce high quality silkworm eggs.
- To develop breeds and hybrids for summer and autumn seasons and rearing technology in submontane regions with fresh climate to use them for additional increase of cocoons production. To develop artificial diet and adopted breeds and hybrids as well as biotechnology for mass silkworm rearing.
- For increasing efficiency of mulberry pyralid and other pests control to develop recommendations including integrated methods of control with predominant use of biocontrol agents, especially after cold winters which significantly decrease mulberry pyralid population.
- To develop further the tendency of total processing of cocoon raw-material, byproducts and wastes to raw-silk, means of traditional medicines, original fabrics, consumer goods, handicraft, etc.
- To widening assortment of natural silk goods it is necessary to intensify R&D and their implementation in bi- and multilateral cooperation in high-tech field (biotechnology and nanotechnology, bioreactors, drug and gene delivery system, microprosthesis, microsensors, MEMS and NEMS products, etc.).

THANKS FOR YOUR ATTENTION
WELCOME TO UZBEKISTAN