

The background of the slide is a close-up photograph of numerous white silkworms (Bombyx mori) crawling on vibrant green mulberry leaves. The silkworms are densely packed, covering most of the visible leaf surface. Their bodies are segmented and have a slightly fuzzy texture. The leaves are large, ovate, and have serrated edges. The overall scene is a naturalistic representation of sericulture.

Problems and Prospects of Sericulture Preservation and Revival in Europe, Caucasus and Central Asia

By

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In present days the main problems of the most European, Caucasus and Central Asian BACSA member countries is how to preserve and revive the sericulture. All the sericultural activities in the BACSA region have declined for the last 30 years.



The fresh cocoon producing countries in the region decreased the total production from about 50 000 t to 30 000 t annually or 1.7 times, while in some countries the decrease was from 21 to 100 times, or they completely stopped the production.



Even though the cocoon and silk production declined dramatically, the Black, Caspian seas and Central Asia region still remains the third world producer, having potential for increase the silk production in the near future.



In Europe (Italy, Switzerland) the top World quality silk fabrics and garment producing industries are concentrated. They however work entirely with raw silk imported mostly from China and smaller quantity from Brazil.



The region possess one of the richest silkworm and mulberry germplasm. Some of the commercial silkworm hybrids, produced in the region manifest comparatively high productivity, namely single cocoon weight 2.2 – 2.5 g, shell ratio 23-24 %, shell weight 0.500 – 0.600 g, filament length 1300 – 1500 m under laboratory conditions. The level of sericultural science and technology in the region countries is at a comparatively high world level.



The main reasons for cocoon and raw silk production decline were that in the ex-communist countries in Eastern Europe and Central Asia the transitional period from centralized to market economic system lead to sudden stop of the governmental support to sericulture, breakage of the traditional economic relationships between the countries, thus the destroy of already established system for sharing the different parts of sericultural production.



In the silk carpet producing countries the difficulties on exportation of silk carpet and also smuggling very cheap silk yarn, selling cheap and low quality carpets especially coming from Far East with prevalence of traditional Persian designs could not be prevented. As the genius hand woven silk carpets didn't have a chance to compete with the others owing to their high prices, many companies left the market, expanded usage of machine-made or other synthetic rugs.



In the Western European countries like Italy and Spain the cocoon production declined much before 1990 due mainly to the insufficient incomes from cocoons, compared with other agricultural crops, high labor cost and wide use of agricultural pesticides, rapid urbanization due to heavy industrialization, the gain of new crops, especially industrial ones, which provided higher incomes and lead to the replacement of the mulberry plantations.



Presently the major constraints for the regional sericulture preservation, revival and development are lack of sufficient financial support from the governments, too low raw silk quality produced, crop losses due to mulberry and silkworm diseases and pesticides, the production technologies at the field level are still more relying on the traditional methods and management system, thus not to be commercially oriented operation, lack of polices for protection sericulture industry.



As a main barrier in the region countries for the cocoon production increase is that the present raw silk prices at the international market still are not able to stimulate enough the farmers to produce cocoons without sufficient additional support from the government or EU.



The strategies for regional sericulture preservation, revival and development include preserving the research institutions in sericulture and the valuable mulberry and silkworm genetic resources, making possible own production of mulberry saplings and hybrid silkworm eggs.



The research centers in the region countries must deal not only with a pure research, but also to have production activities such as providing mulberry saplings, silkworm eggs and technical support to the farmers.



Governmental and/or European union subsidies release for the research entities and those dealing with production of silkworm eggs, mulberry saplings, silkworm rearing equipment etc. should be provided.





- It is also necessary to have grants for the physical persons and companies for planting mulberry plantations and building silkworm rearing houses and equipment, grants for training in sericulture, direct subsidies, based on kg of fresh cocoons produced and/or boxes of silkworm eggs reared.

The direct subsidies should provide a fresh cocoon price level which will keep the existing farmers to continue dealing with this activity and also the price to be so attractive that more people to become interested to take up sericulture.



Unlike most of the other agricultural producers the sericulturists are not able neither to use their product at home nor to deal with the cocoon marketing. In fact without a guaranteed accepting and paying the fresh cocoons their production is a nonsense.



Presently in the region the cocoon purchasing from the producers, their processing and marketing of the final products are almost entirely in the hands of the private business or some cooperatives like in Turkey and Greece, that is why it is very important how the private business can be convinced that the silk industry is a profitable business in order to deal with it.



In the present world of raw silk prices, dictated by only one big country and also unstable, the subsidies could contribute in a great extent in making the silk production more reliable and profitable, thus more attractive for the business.



It will be necessary a sericulture products diversification by development of new products such as use the mulberry and silkworm for non – textile purposes, production of very high quality uni-bivoltine silk with certain special characteristics, organic silk, silk handcraft production for selling to the tourists at the local market and also for export.



In the short-medium term future the silk industry in the region should be mostly oriented to export. If some of the countries in the BACSA region can meet the raw silk standard requirements there is a big raw silk market in Europe and Central Asia.



In the sericulture preservation and revival process some important trends in the World sericulture industries development should be considered.

So far the subsidies for sericulture, even very generous in some countries succeeded to save it from complete disappearing, but only maintained the production at a low level and did not succeed to revive it to the previous high production levels.



In nowadays there are two main cocoon producers – China and India, providing more than 97 % of the Global cocoon production. In both two countries the local silk market plays a very important role, especially in India, thus presently China exports more than 98 % of the raw silk in the world market. Therefore the fresh cocoon purchasing prices in all the other countries are determined depending on the Chinese raw silk price.



Now the current raw silk prices are stable since a couple of months. Low quality 2A/3A, from frozen cocoon price is at around 50 US\$/kg. Regular qualities for Europe, i.e. 4A/5A from not so famous mills, good for crepe and weft yarn, have a price bit below 60 US\$/kg. Very good qualities still keep a price, around 75 US\$/kg.



During the 6-th Asia-Pacific Congress of Sericulture and Insect biotechnology , held in March 2019 in India, according to the Chinese country report, presented by Dr. Guo the average fresh cocoon price in 2018 in China was 50.56 CNY/kg , which is the equivalent of about 7.5 US\$.



Considering the fresh cocoon purchasing price, if calculate the approximate raw silk price it should be around 55 – 60 \$/kg, if the raw silk is produced by the whole cocoon lot. If however the raw silk is produced by 1st grade cocoons it's price will be higher. The question is how a raw silk is sold at a price below its production costs.



The present expectations are the cocoon production in China in this year to reduce 10% – 15% or so. Due to this trend the raw silk prices soon or later will start again upward trend and might reach a next level of about 80-100 US\$/kg. It may be take several years. In the meantime there are no sign of new sources for raw silk despite announcements.



In this situation, which are the main advantages of the BACSA region countries?:

- In most of the region countries mulberry is grown almost without implementation of any pesticides;**
- Mulberry has comparatively long life span – a plantation could be exploited for every year silkworm rearing even for more than 100 years;**



- Clearer environment and safe system for organic certification, thus allowing to produce organic cocoons;
- The climate is very favorable for high quality silkworm egg production;
- The climatic conditions during the spring and summer season allow producing the highest quality cocoons with very high yield;



-In some countries there are possibilities to get European and national subsidies for the cocoon producers;

-The region is producer of the highest world quality silk products, such as fashion fabrics and garment and silk carpets;

-Europe is the biggest World market for high quality expensive silk products.



The main problem is therefore how to mobilize all those natural, human and industrial resources in order to preserve revive, and develop the sericulture industry.

I hope that my presentation will give you some material for thinking and discussions at this conference.





**THANK YOU FOR YOUR
ATTENTION!**