

**Fourth Executive Meeting
of
Black, Caspian Seas and Central Asia
Silk Association
(BACSA)
5th November 2008, Athens, Greece**

PROCEEDINGS



**Fourth Executive Meeting
of
Black, Caspian Seas and Central Asia Silk Association
(BACSA)
5th November 2008, Athens, Greece**

PROGRAMME

- 1. Opening – Dr P. Tzenov, BACSA president**
- 2. New strategies for the regional sericulture development – by Dr P. Tzenov and Dr E. Kipriotis**
- 3. Reports of the BACSA national coordinators about sericulture status and the strategies for development in each country. – by the BACSA national coordinators in each country**
- 4. Panel discussion on the above topics.**
- 5. Panel discussion on how to participate in the EU 7th framework programme.**
- 6. BACSA organizational.**

Final document
of the 4th BACSA meeting, held on 5th November 2008 at Athens,
Greece during the 21st Congress of the International Sericultural
Commission

The BACSA executive committee in the forum: **"Fourth Executive Meeting of Black, Caspian Seas and Central Asia Silk Association (BACSA)"**, 5th November 2008, Athens, Greece took the following decisions and planned follow ups:

1. Express formal gratefulness to the Government of Greece and personally to Dr E. Kipriotis – BACSA vice – president and national coordinator in Greece for organizing the 4th BACSA meeting.
2. The BACSA' national coordinators to inform their governments about the 4th BACSA executive meeting results and decisions.
Term: December 2008
Responsible persons: The BACSA national coordinators
3. To prepare and upload at the BACSA web site the Proceedings of the 4th BACSA meeting, decisions and follow ups
Term: December 2008
Responsible person: Dr P. Tzenov
4. To make efforts in re-starting the evaluation by the FAO of the BACSA regional TCP project proposal "Improvement and Revival of Sericulture Industries in Eastern Europe and Central Asia".
Term: November 2008
Responsible person: Dr P. Tzenov
5. To submit to FAO a proposal about support to regional sericulture germplasm maintenance, evaluation, exchange and utilization.
Term: November 2008
Responsible persons: Dr P. Tzenov, Dr H. Z. Lea & Dr S. Cappellozza
6. To nominate a new BACSA national coordinator for Ukraine.
Term: December 2008
Responsible persons: Dr P. Tzenov and the Executive committee members
7. To replace some of the not efficient BACSA Executive members with new persons.
Term: December 2008
Responsible persons: Dr P. Tzenov and the Executive committee members

8. To make efforts in strengthening the possible technical and scientific cooperation among the BACSA and other countries through the European framework programmes. The EU member countries (Bulgaria, Greece and Romania) and candidates (Turkey) should be especially active in searching for foreign partners and initiation of joint research projects and cooperation.

Term: permanent

Responsible persons: All the Executive committee members

9. Recommends to Dr E. Kipriotis – BACSA National coordinator in Greece to initiate actions in the Greek government, targeting to the adaptation of the existing legislative frames for the control, production, provision and circulation of silkworm and mulberry genetic material to the recently created situation in sericulture.

Term: January 2009

Responsible person: Dr E. Kipriotis

10. Recommends to the BACSA national coordinator in Iran, Dr Etebary to initiate actions in the Iranian government, targeting to provide more financial support to the sericulture farmers.

Term: January 2009

Responsible person: Dr K. Etebary

11. BACSA Executive committee recommends to the Bulgarian Sericulture Association to continue making efforts the government of Bulgaria to start implementation after 2009 of the EUROPEAN COUNCIL REGULATION (EC) No 1544/2006 of 5 October 2006 laying down special measures to encourage silkworm rearing and the COMMISSION REGULATION (EC) No 1744/2006 of 24 November 2006 on detailed rules for aid in respect of silkworms. For year 2009 to suggest to the government of Bulgaria providing national financial direct support to the silkworm rearers.

Term: permanent

Responsible persons: Mr. S. Beshkov, Dr D. Grekov, Dr P. Tzenov

12. To conduct the next 5th BACSA meeting in September or October 2009 while the place and the theme of the international meeting will be decided in the early 2009.

Responsible persons: BACSA Executive committee members

13. The BACSA national coordinators and the Executive committee members to make efforts in organizing national/regional meetings or conferences on the occasion of the International year of natural fibers 2009.

Responsible persons: BACSA Executive committee members

14. All the new ideas and proposals for the BACSA activities/projects to be sent by the Executive committee members

to the BACSA president who is obliged to reply to them/all the executive committee members within maximum 15 days after receiving the proposal.

Responsible persons: BACSA Executive committee members & the President

**The 4th BACSA meeting
5th November 2008
Athens, Greece**

NEW STRATEGIES FOR THE REGIONAL SERICULTURE DEVELOPMENT

BY

DR PANOMIR TZENOV & DR EVRIPIDIS KIPRIOTIS

BLACK, CASPIAN SEAS AND CENTRAL ASIA SILK ASSOCIATION, BACSA





Introduction

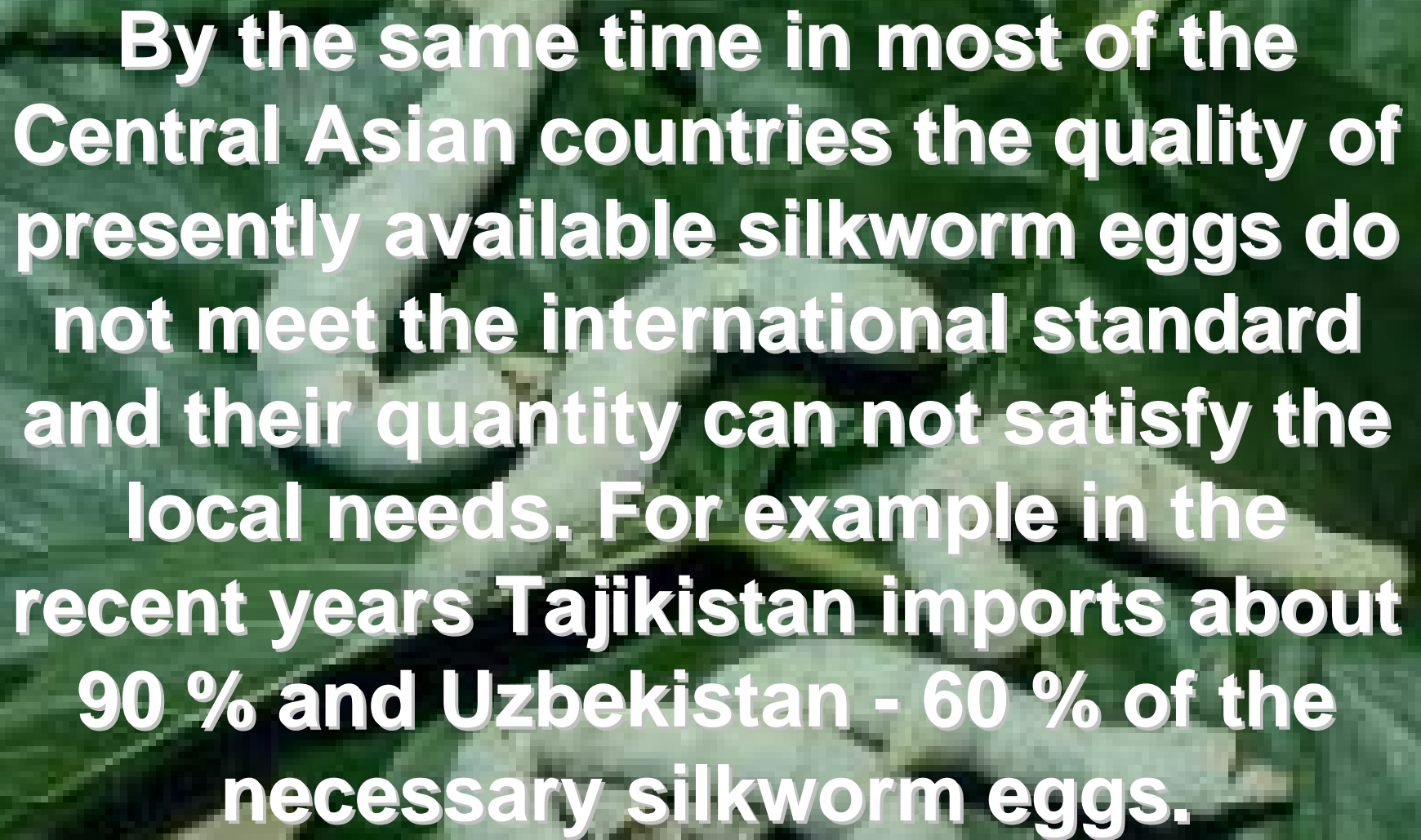
The preconditions and prospects for sericulture revival and development in the Black, Caspian seas and Central Asia (BACSA) region are the very long tradition and experience in sericulture, availability of rich mulberry tree resources, favorable climatic conditions, governmental support to the sector, the increasing demand within the European countries for natural and biological products along with the close huge European silk market etc.

The recent constraints, facing the sericulture industry development in the region may be divided as common for all the countries and specific for each the European and Central Asian countries. The main common problems for all the region are too low raw silk quality produced presently, resulting in fail to receive the standard price in the markets and to loose existing markets and that the production technologies at the field level are still more relying on the traditional technology and management system thus not to be commercially oriented operation.





On the other hand as a main barrier in the East European countries for their sericulture development is that presently the too low raw silk prices at the international market can not stimulate the farmers to produce cocoons without additional support from the government.

A close-up photograph of a silkworm on a green mulberry leaf. The silkworm is positioned in the lower right quadrant, facing left. The leaf is a vibrant green with prominent veins. The text is overlaid on the left and center of the image in a bold, white, sans-serif font with a black outline.

By the same time in most of the Central Asian countries the quality of presently available silkworm eggs do not meet the international standard and their quantity can not satisfy the local needs. For example in the recent years Tajikistan imports about 90 % and Uzbekistan - 60 % of the necessary silkworm eggs.

One of the basic aims of expansion of the inter – regional cooperation is therefore to transmit the richer sericulture germplasms and advanced technologies from the West to the East and simultaneously the East European countries to play a role as a bridge for opening the European silk market to the silk products both from Eastern Europe and Central Asia.



Reasons for the decline of cocoon and silk production in the BACSA region



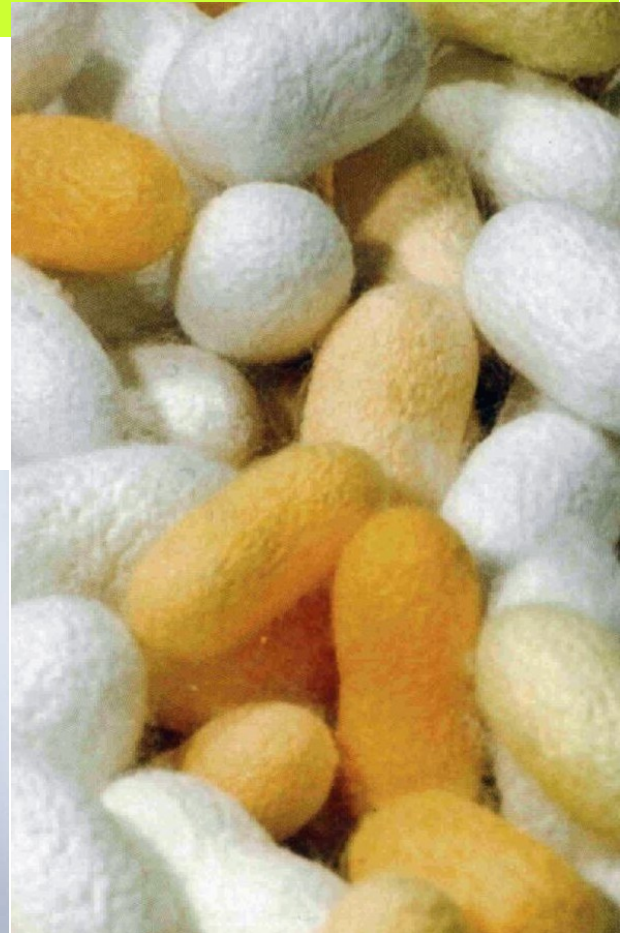
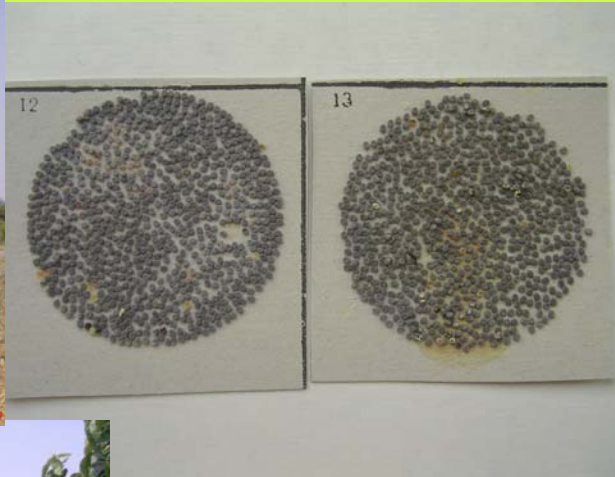
The major reasons are:

- The transitional period from centralized to market economic system which lead to sudden stop of the governmental support to sericulture, breakage of the traditional economic relationships between the countries thus the destroy of the already established system for sharing the different parts of sericultural production.

- **The raw silk price at the international market has been dictated by China and only few other low income countries could withstand the competition without state subsidies for the cocoon producers.**

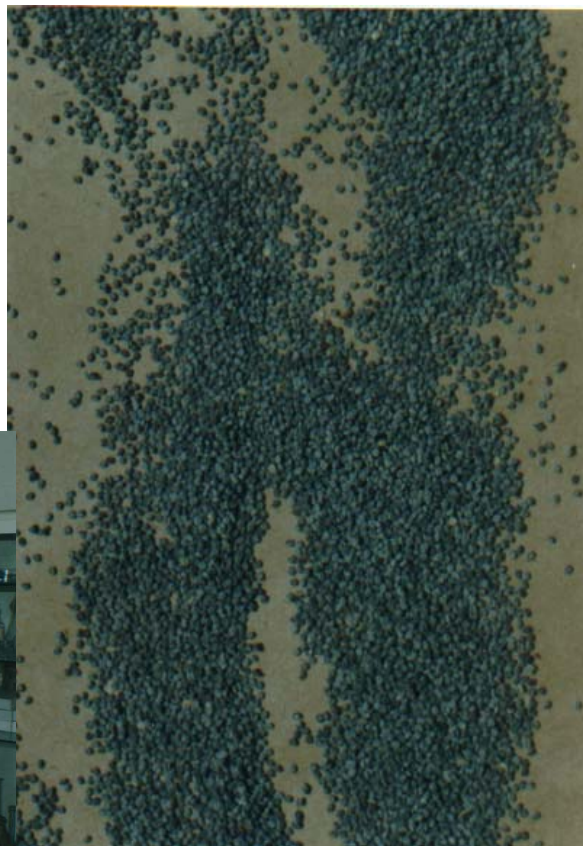


- The appearance of new, competitive with the silk synthetic fibres and their huge distribution in the international market.
- The instability of cocoon and silk prices particularly within the local markets.



The rapid urbanization due to heavy industrialization, especially in Eastern Europe.

- The gain of new crops, especially industrial ones, which provided higher incomes and lead to the replacement of the mulberry plantations.**



•Reduction and/or limitation of international economic growth rate which encourages utilization of cheaper products.



The disadvantages and advantages of the BACSA region countries for their sericulture revival and development

As the main disadvantages for sericulture development may be identified:

- **The impossibility to compete without state support with China and other developing countries with respect to the cocoon/raw silk productional costs.**
- **The impossibility to compete with Italy and France in silk fabrics and commodities printing and design.**



The disadvantages and advantages of the BACSA region countries for their sericulture revival and development

The main advantages are:

- **Availability of comparatively rich mulberry and silkworm genetic resources, well developed science and technology in sericulture. In 2006 and 2007 BACSA organized in 4 countries simultaneously an international testing of 15 F1 silkworm hybrids, originated from 10 different countries which proved that after the Japanese hybrid some of the local hybrids from Bulgaria, Ukraine, Turkey, Azerbaijan, Romania and Uzbekistan manifested the highest silk productivity.**



The disadvantages and advantages of the BACSA region countries for their sericulture revival and development

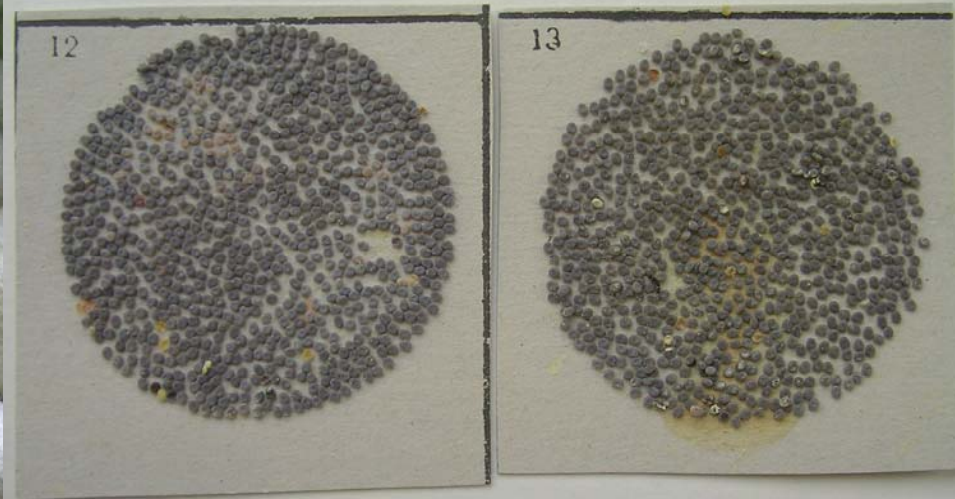
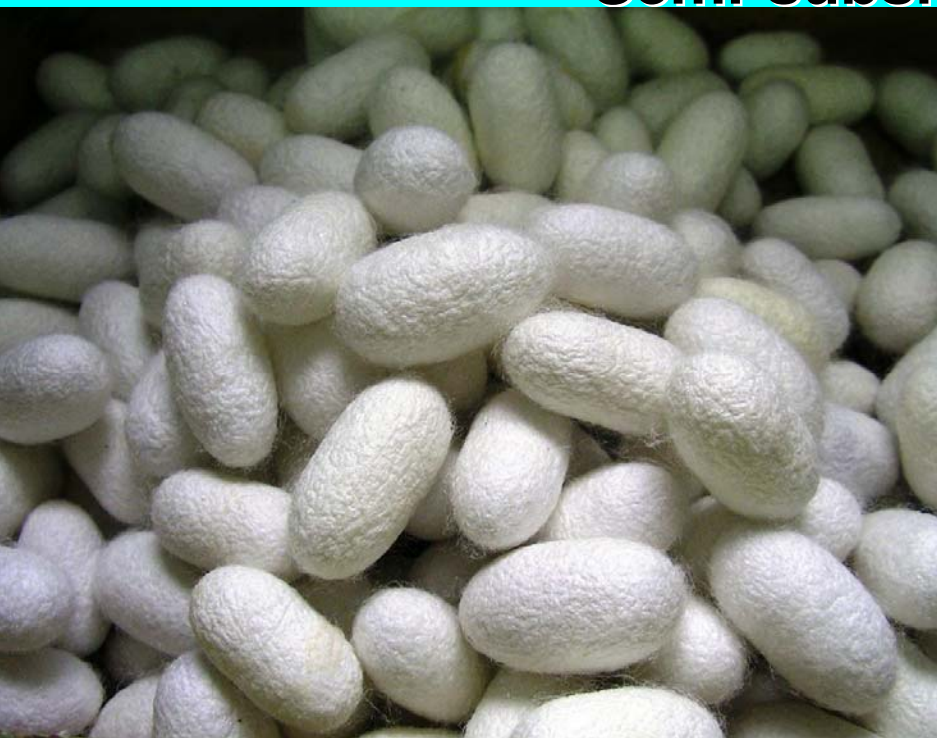
- **The possible scientific cooperation among the BACSA and other countries through the European framework programmes.**



The disadvantages and advantages of the BACSA region countries for their sericulture revival and development

•The strong state support to sericulture in some of the region countries: Recently most of the region countries gradually solved the economical problems, caused by the transition from a centralized to a free market system, thus the governments increased their support to the silk industry. The silkworm rearing activity within the European Union (EU) countries such as Bulgaria, Greece and Romania is considered as one of the protected and promoted agro-industry. The European commission conducts a protective policy for sericulture development by providing a direct subsidy in amount of EUR 133.26 for each silkworm egg box reared. From the European subsidy plus the cocoon purchasing price for only 3 months work it may be obtained an annual income by rearing 10 boxes of silkworm eggs in amount of around EUR 3000 which puts the sericulture into the most profitable agricultural crops.

- **Sericulture development projects are supported by EU funds through the following measures of the Rural Development Program for the period 2007 – 2013:**
- **Professional training, informational activities and scientific knowledge dissemination.**
- **Establishment of farms by young farmers.**
- **Modernizing the agricultural farms.**
- **Value adding to agricultural and forestry products.**
- **Semi-subsistence farms.**



- **Direct financial support to the sericulture farmers in amount of US\$ 8-9/kg fresh cocoons is provided by the Turkish government.**

Considering the state subsidies to sericulture in some of the region countries, it may be concluded that their cocoons/raw silk produced are quite competitive at the market.

❖ Recently some of the biggest silk producers in the region such as Tajikistan and Uzbekistan attracted some foreign investors in their silk industry.

The local silk market in the region is in a process of development following the gradual increase of the people's living standard.

The still available unique silk handcrafts production is also an important factor.

A close-up photograph of several mulberries. In the center, a dark purple/black mulberry is in sharp focus. To its right and slightly behind, a bright red mulberry is visible. Other red and purple berries are scattered in the background, which is softly blurred. The lighting is natural, highlighting the texture of the small drupelets on the berries.

The solutions for future sericulture industries development

The BACSA region countries should use their unique advantages in sericulture development by means of product diversification. The main directions of the regional strategy for sericultural industries revival and development may be:

- Development of new sericultural products such as use the mulberry and silkworm for non – silk purposes. Utilization the rich germplasm and advanced science for development of new varieties, breeds and hybrids suitable for these aims.**

***WHICH ARE THE MAJOR CONSTRAINTS AGAINST
AND RECOMMENDATIONS FOR PROMOTION OF
USING THE SERICULTURE PRODUCTS FOR NON –
TEXTILE PURPOSES IN THE BACSA COUNTRIES?***

- Lack of tradition and experience in the scientifically based processing the waste and by – products from sericulture;
- Not sufficient research made on the subject;
- Lack of enough industrial technologies for sericulture products non-textile processing;



- The present European system for giving subsidies to the sericultural farmers requires producing obligatory not less than 20 kg of fresh cocoons from one box of eggs. In the case that the farmers sell for example silkworm larvae instead of cocoons they can not get any EU subsidy.

Therefore there should be found some other criteria to prove the amount of silkworms reared and the EU regulations for the subsidies to be changed in order to stimulate not only the cocoon production but the other products from sericulture as well.



•The mulberry and silkworm breeding priorities may be re-directed in order to meet the requirements of the products use for non – textile purposes. For example some new mulberry varieties with high fruit yield and quality or varieties with faster growth and accumulation of quality wood for the furniture industry may be created.

In the silkworm new strains having bigger larvae and pupae or with higher sericin content or tolerable to artificial diet feeding or breeds with some specific quantitative traits may be evolved.



MAJOR CONSTRAINTS AGAINST AND RECOMMENDATIONS FOR PROMOTION OF USING THE SERICULTURE PRODUCTS FOR NON –TEXTILE PURPOSES IN THE BACSA COUNTRIES

- It is also important to develop a technology for production and supply with high quality silkworm eggs all over the year.
- It is necessary that the mulberry agrotechnics and harvesting systems and the silkworm rearing technologies to correspond with those new non – textile purposes product use.



**MAJOR CONSTRAINTS AGAINST AND
RECOMMENDATIONS FOR PROMOTION OF USING
THE SERICULTURE PRODUCTS FOR NON-TEXTILE
PURPOSES IN THE BALKAN COUNTRIES**

- The silkworms use for non textile items requires in many cases to grow them all over the year, therefore the BACSA countries have to develop the silkworm artificial diet rearing system.



•It is expected that production costs in the BACSA region will increase while more countries with lower labour costs will join the sericulture production. Therefore, it is challenged to the region producers to compete in the world markets. In order to survive in sericulture business, producers should not make cheap products with low quality to compete for the prices but to produce more sophisticated products which satisfy consumers even though they are more expensive.



The strategy of the BACSA region sericulture products processing industries should be to produce our own unique products which are definitely different from other countries.

It is important to encourage the sericulture products processing companies to establish global relationships, such as international joint ventures and cooperative deals in the field of research and technology licensing.



•Considering the rich sericulture germplasm in Europe, an European mulberry and silkworm genetic resources preservation center may be established in one of the member states through the EU financial support programmes. The main tasks of this center could be preservation of all mulberry and silkworm varieties available in the member states in parallel with the countries of their origin, development of innovative techniques for the germplasm preservation, supply of the member states with genetic material for research purposes etc.



- The BACSA countries may be established as sources of sericultural genetic resources for the developing countries which may be paid by the respective donor organizations.



The solutions for future sericulture industries development

- **Production in bi and multilateral cooperation mulberry sapling of highly productive varieties and high quality silkworm eggs for meeting the local needs and for export as well.**



The solutions for future sericulture industries development

•Production of very high quality bivoltine silk with certain special characteristics. As per the advice of Mr. E. Seitz, a long-term silk textile expert if the BACSA countries are able to offer grey silk woven fabrics, mostly “Creep De Chine”, 60 m without fault, alternatively in 90 cm and 150 cm width they could be highly competitive. Since the BACSA region is within or nearby EU if these fabrics are produced on stock the BACSA countries would have the advantage to deliver them within days to Italy and France. With modern automatic machines, wages would not play a major role. The looms would weave the same product all over the year, no change in yarn count, no change in the loom, no change of quality, thus such plant would be extremely competitive.

•Silk handcraft production for selling to the tourists at the local market and also for export.



The BACSA region countries could offer the following fields for cooperation and business partnership with the R & D institutions and the silk industry from other countries:

- **Supply with high quality P1 and F1 bivoltine silkworm eggs;**
- **Making exchange of mulberry varieties and silkworm hybrids;**
- **Participation in joint research projects, financed by the EU and/or other donors;**
- **Short/medium term training courses of trainees from BACSA region in other countries and vice versa;**
- **Conducting bachelor, magisterial and PhD training courses of foreign students in some BACSA countries;**
- **Establishment of joint venture companies for production of raw silk, fabrics and garment;**
- **Establishment of joint trading companies for sell of silk products in Europe.**

Conclusions and recommendations

❖ As a final conclusion may be summarized that we have all the preconditions for a future sericulture development in the BACSA region. It is of a crucial importance to modernize the silkworm rearing at the field level and to improve the cocoon and silk quality, to provide stable state or EU financial support to the sericulture, to enhance the regional scientific cooperation through participation in the EU 7th framework



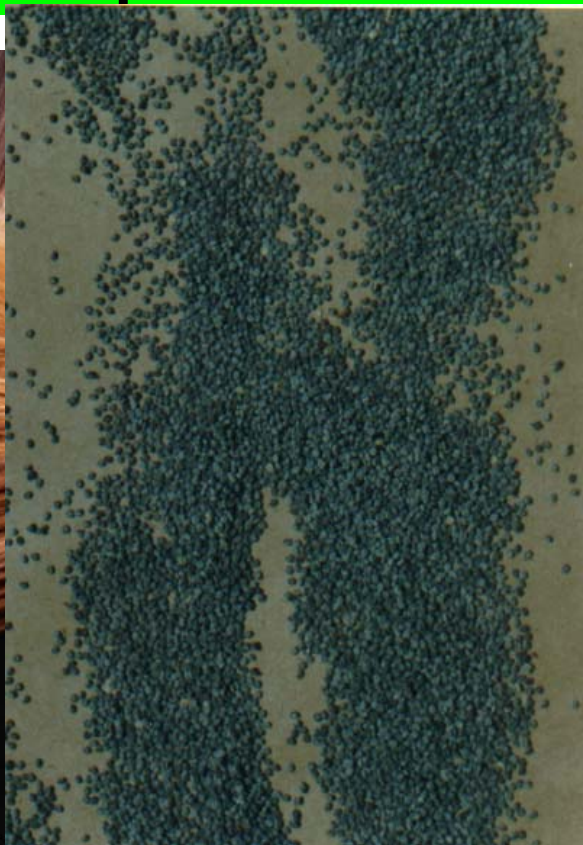
Conclusions and recommendations

❖ The sericulture product diversification is very important in order to stabilize the industry and to survive during the crisis situations. This diversification requires the development of sericulture products non – textile use and to produce our own more sophisticated and unique products.



Conclusions and recommendations

❖ An European mulberry and silkworm genetic resources preservation center may be established in one of the member states through the EU financial support programmes. It is necessary to encourage the bi and multilateral cooperation especially in the mulberry sapling and silkworm eggs production and trade.





Thank you for your attention

RECENT SERICULTURE STATUS IN BULGARIA AND TRENDS FOR DEVELOPMENT

By Dr Dimitar Grekov

BACSA national coordinator in Bulgaria

**Paper presented in the 4th BACSA meeting
November 5, 2008 Athens, Greece**

Dear ladies and gentlemen, colleagues,

The sericulture industry development in Bulgaria now has the following three main components, namely:

- New possibilities for the sericulture support from European Union funds;
- New achievements of the sericultural science and technology;
- The private business activities;

1. The support from the EU funds

Before joining to the EU the Bulgarian Government signed a 3 – year agreement to pay direct European subsidies to the agricultural producers only per unit land (ha). However this system for giving direct subsidies benefited mostly the farmers who produce cereals. For example the animal breeders receive very limited support through this system. It's same for the sericulture – the payment per one ha of mulberry plantation is about 100 EUR, while if the subsidy is released per silkworm egg box reared the farmer could obtain about 4000 EUR from one ha mulberry plantation as subsidy. Unfortunately until the end of the next year the direct subsidy system will remain the same.

The sericulture farmers expected to get this good European subsidy since the beginning of 2007 so most of them became very much disappointed and the planned increase of the cocoon production in Bulgaria had not been realized.

The Sericulture Experiment Station, Vratza and the Bulgarian sericulture association raised many times this problem at the Ministry of Agriculture and Food, the Prime – Minister's office, the Parliament etc. An official enquiry to the European commission about this problem was sent by the Bulgarian Government. However the response of the European commission was that until the end of 2009 Bulgaria can not implement any direct payment per silkworm egg box reared.

Now the Bulgarian Government knows the problem and we have their assurances that in the next agreement with the EU the subsidy system for the sericulture per box of eggs will be considered.

Since the beginning of this year in Bulgaria has started the Program for rural areas development which has different measures for supporting the long term – investments in agriculture sector.

Sericulture development projects will be supported by EU funds through the following measures of the Rural Development Program for the period 2007 – 2013:

- Professional training, informational activities and scientific knowledge dissemination.
- Establishment of farms by young farmers.
- Modernizing the agricultural farms.
- Value adding to agricultural and forestry products.
- Semi-subsistence farms.

Considering the very good EU direct subsidy per silkworm egg box reared, which is expected to come after 2009 now many agricultural producers are interested to apply for funding through the above EU programmes.

So it could be said that at present the capital investments in sericulture are provided by the EU Rural Development Program and the direct support to the cocoon price will be provided after 2009. These two factors are a sound basis for the future sericulture industry development in Bulgaria.

2. The new achievements of the sericultural science and technology

In the last two years at the SES – Vratza and Agricultural University, Plovdiv were created the following new scientific products:

- one new four – way sex – limited for larval markings silkworm hybrid, having higher tolerance to adverse rearing conditions;
- one new silkworm hybrid having silk yield comparable with those of the Japanese hybrid Shunrei x Shogetsu;
- technology for production of high quality silkworm eggs, suitable for rearing all over the year;
- two new sex – limited for cocoon color silkworm breeds and one commercial hybrid;

The above scientific achievements will contribute for increase of the competitiveness of the Bulgarian silkworm eggs, cocoons and raw silk.

3. The private business activities

A private Joint Stock company, named “Bulgarian silk” was registered in May 2005 in Sofia. This company has as main target activities the realization of a national project for sericulture revival and development and increase the cocoon and silk production in Bulgaria in order to reach production of about 3.5 million meters of silk fabrics around 2010-2012. For a short time the company prepared a business plan and made contacts with Bulgarian and foreign commercial banks for getting loans for project funding. Unfortunately their efforts in providing funding for their project still do not have any evident results. The global economical crisis had also its contribution.

By the same time "Bulgarian silk" company made a lot of efforts to prepare the necessary conditions for the start of project. The company identified 72 potential mulberry sapling producers, with a total capacity of 10 million sapling during the next five years. The producers were trained at SES-Vratza. The company developed business plans of several bigger companies which are going to plant around 1000 ha mulberry plantations.

The company plans to buy the necessary cocoon drying machines and to import from China fully automatic silk reeling machines.

By the same time in this year a new association of the cocoon and silk producers in North Bulgaria was established in the city of Russe and based on the silk weaving factory Danubian silk. This association has very serious intentions in increasing the cocoon production in the next years in order to satisfy the capacity of silk weaving factory with high quality raw silk.

There's also a private silk weaving company in Sofia who buys raw silk from the SES – Vratza and produces mostly boutique small series of silk fabrics by orders from fashion designers.

The private business activities in Bulgaria are recently directed not only in silk production, but also in the use of sericultural products for non – textile purposes. For example new mulberry plantations were created by two companies for production of mulberry fruits, leaves for tea making and for high quality wood to be used in the furniture industry.

We expect after 2009 a gradual increase of cocoon and silk production in Bulgaria.

Sericulture in Greece of 2008 Problems – Aspects – Prospects

Paper presented in the 4th BACSA meeting
November 5, 2008 Athens, Greece

Kipriotis Evripidis, M.Sc., Ph.D.

**National Agricultural Research Foundation (N.AG.RE.F.), Komotini Agricultural Research
Station
Merarhias Serron 18, Komotini 69 100, Greece**

In the last two years silkworm rearing in Greece, in contrast to previous predictions and expectations, showed a slide decline, both by means of silkworm egg boxes reared and cocoons produced nationally. The number of involved farmers remained approximately at the same levels as in the last five years, although some new farmers had entered the sector, but the reared silkworm egg boxes declined to a total number of 5.000 boxes in year 2008. The only promising point out of the so formed situation is that the new entered to the sector silkworm farmers had invested to new modern rearing installations including egg incubation and hatching facilities as well as their own cocoon cooking installations. These new installations have come out through specific programs funded by the EU and targeting to the reorganization and the improvement of already operating farm units.

As it was mentioned previously silkworm rearing in Greece showed a slide decline in the last two years, in contrast to previous predictions and expectations which came out of the strong support provided to sericulture by the EU funds, both in rearing and mulberry field installation. The so developed situation definitely reflects some nationally existing problems and complications around sericulture which affect the sector and derive from the following facts:

- The legislative frame which controls the full process of silkworm egg production, examination, control, importation and distribution exists since 1918 and is completely old-fashioned and insufficient.
- There had not been developed a national strategy for the sector of sericulture, concerning promotion, research, training, evaluation and use of national silkworm and mulberry resources, and general care for this so important by means of income sector.
- Greek sericulture is up-to-date completely depended upon imported silkworm eggs through a Public Tender announced every year by the Ministry of Agriculture. Through this process there can be imported every year silkworm eggs of different origin and quality, since there are put very loose and brief specifications and recommendations, not coming out of previous testing and evaluation procedures. This in many cases drives to the purchase and distribution of eggs not corresponding to the specific rearing conditions of each Greek area, since from south to north of the country there are existing extreme climatic and rearing conditions.
- Apart of that there interferes always a huge degree of burrocracy in the whole process of egg provision, which in many times guides to delays catastrophic for the rearing, putting it out of the suitable season.
- The same situation is met in the provision of mulberry saplings for the installation of new mulberry fields, which again is faced in the same way, by

occasional imports from several directions, without any previous testing and evaluation concerning the adaptation to the different Greek regions, the productivity and the leaf quality. This situation caused to some farmers serious problems with their newly installed mulberry fields, especially by means of cold damages due to very early sprouting of imported, without any testing, mulberry varieties.

As it was mentioned, the absolute cause of the above situation is the lack of a national system controlling the registration of silkworm genetic material, by means of local or imported breeds, lines and hybrids, and also the lack of specific law for the approval and circulation of local and imported silkworm genetic material in a national level, something which should only be done through previous testing and evaluation of the any silkworm genetic material, for its adaptation and suitability to the specific climatic and rearing conditions of the various Greek regions.

The same system should be applied to the registration and circulation of mulberry genetic material for Selicultural purposes, taking in consideration the adaptation and suitability of any local or imported material to the specific climatic and rearing conditions of the various Greek regions.

As the top of all the above described problems and complications comes the lack of national reeling facilities, something which creates many difficulties in the cocoon disposal and selling. There is an almost complete lack of local trade for this product and many of the produced cocoons are not directed to any market or sold to several occasional directions, under not realistic prices and through processes not beneficial to the farmers, something which guides to serious income losses.

Through all the above described facts the out - coming conclusions are:

- The Greek sericulture has an interesting potential and many prospects for development, deriving from the high EU support, both to rearing and mulberry field installation.
- Under the existing legislative frames for the control, production, provision and circulation of silkworm and mulberry genetic material, there are created to the farmers many and serious problems, causing serious losses to their sericultural income.
- The development of local reeling facilities and cocoon trade structures is considered as very important and able to add serious increase to the farmer's income, and this matter should be faced urgently and efficiently by the Greek authorities.
- The final conclusion is that there are existing interesting prospects for the Greek sericulture, able to increase the sector and the farmer's income, contribute to the replacement of declining agricultural activities – as the tobacco cultivation- and also contribute to the problems of unemployment and rural development.
- The affecting the Greek sericulture problems can be efficiently controlled by few simple actions, targeting to the adaptation of the legislative frame to the recently created situation in sericulture, the sector's modern demands and the support of the development of a national cocoon reeling and trade frame.

An Overview on the Situation of Sericulture in Iran

Seyed Hossein Hosseini Moghaddam

Animal Science Department, Agriculture Faculty, University of Guilan, Rasht, Iran
Correspondence email address: hosseini@guilan.ac.ir / hosseinim2001@yahoo.com

Abstract

Several years ago production of cocoon and silk reached to maximum level during last century, but sharp decrease of sericulture and silk industry happened within few years ago. Whereas Iran is the seventh producer of cocoon and silk in the world, it has been appeared as a silk and cocoon import country. Approximately one – third of the silkworm raisers plan to reduce the volume of their sericulture activities and half of them remain to want the continuation of the silkworm rearing. The aim of this report is to supply the quantitative and qualitative situation and potential future of sericulture in Iran.

Silkworm Raisers Viewpoint

In order to study of sericulture problems and the viewpoints of the silkworm raisers in Iran a research was conducted in the entire silkworm raising provinces. 737 questionnaires were distributed based upon their share to buy the silkworm egg. The samples were selected randomly and systematically.

While 12% of the silkworm raisers were lower than 30 years old, 47% of them were 30 to 50 years old and 41% were higher than 50 years old. Of those who have been questioned, 93% of them have had the silkworm raisers' parents and 72% of them have raised the silkworm beyond ten times. The silkworm raiser expressed various reasons to do this occupation. The 30% of them continued this occupation because of their ancestors' profession, 28% of them set forth to do that because of being in a situation to need the money severely, 26% of them told the reason to do that profession as interested in that, 11% of them brought up being free while rearing the silkworm, 4% of them said the good income and 1% of them the more cases to do that task as a reason. One of the interesting points of this view – measuring is the time to earn the income. 86% of the them recognized this time being very on time and this time was not of particular importance just for 10% of them (4% of the questionnaires were not to be answered). Of the total individuals who are asked, 36% of them believe that the production of the fresh cocoon compared to the other agricultural activities, including animal husbandry, rice planting, tea planting, gardening and etc, is not saving economically and 53% of them believe that the production of the cocoon compared to the other activity is to some extent saving economically, only, 9% of it was known being much saving economically by them. According to quantity of silkworm rearing this work is a minor job for farmers and only 3 percent of raisers earn adequate money by this activity.

The problems of the raisers while rearing suggest that most of them have difficulties not associated with the quality of the silkworm egg and the silkworm; but lack of information regarding the principles of silkworm rearing in addition to the usage of the traditional rearing places. However, numbers of the individuals, which have set forth the problem of the silkworm diseases, are numerous and it shows that there exists this problem yet, in spite of performing efforts to produce the resistance silkworm varieties. Therefore more silkworm breeding program need to be conducted. Furthermore, this study clarified that the most important reasons for not buying silkworm egg are the low

price of the cocoon and the others, including the lack of attachment, the inferior quality of the silkworm egg and the silkworm or lack of the land or the require facilities to rear are not very important to be posed. The reason for the attachment to sericulture is the traditional nature of the activities of these families so that they suppose this occupation as the continuation of their ancestors' activities, moreover, since the entire affaire and tasks are performed by the members of the family, the cost to produce the cocoon is to be reduced, that is, in case of the existence of the mulberry, the farming families intend to earn an income in the best possible times. As a result, there are tendency to silkworm rearing permanently beside the other farming activities.

Current Situation

With regard to the current price inflation in the country as well as the increased labor cost, the return of sericulture can provides very little amount of the living costs, and the farmers are not satisfied to the cocoon price. Furthermore in the Central Asian countries neighboring Iran, such as Ozbakistan and Afghanistan, which is not the consumer of the silk, it is produced with the price lower than it in Iran. Meanwhile, the cheaper foreign silk thread are available, therefore, silk price has not been increased significantly during past years in Iran, as a result, there is little incentive for silkworm rearing activity. The lack of attachment, the inferior quality of the silkworm egg or lack of the land and the required facilities for silkworm rearing are all not very important reasons for the declining of sericulture in Iran. During few years ago the average fresh cocoon price was about 3 to 4 \$. Due to these circumstances sharp decrease of sericulture and silk industry happened within few years ago and today Iran was appeared as a silk and cocoon import country.

While 77000 boxes of silkworm egg sold in 2006, 50000 boxes was purchased by the Guilan's farmers and thus, the share of the Guilan Province reached to 65%, while it was about 55% in the past. This means in spite of fluctuation of cocoon production Guilan province still play the major role in sericulture of Iran. Here the attachment of farmers to sericulture in some cities of Guilan province means farmers maintained this occupation as the continuation of their ancestors' activities due to the traditional nature of the agricultural; moreover, since the entire affaire is performed by the family members, the cocoon production cost is minimized. The major agriculture activities in this region are rice, tea, and silkworm rearing, therefore, wherever there are exited mulberry trees, the farming families intend to earn more income by incorporating silkworm rearing.

While the average of silk production during 20 years ago was 640T in 2008 just 180 T was produced. Approximately 400-500 ton reduction of the silk production in Iran during several years ago was not matched to the decrease of carpet production and exportation (Fig 1); this is because a part of the raw silk has been imported from abroad. Based upon the formal reports, 178 tons of silk has been imported to the country from April to September of 2006. Therefore with regards to actual silk business it is unlikely that the silk production is affected by the rate of the carpet's exportations.

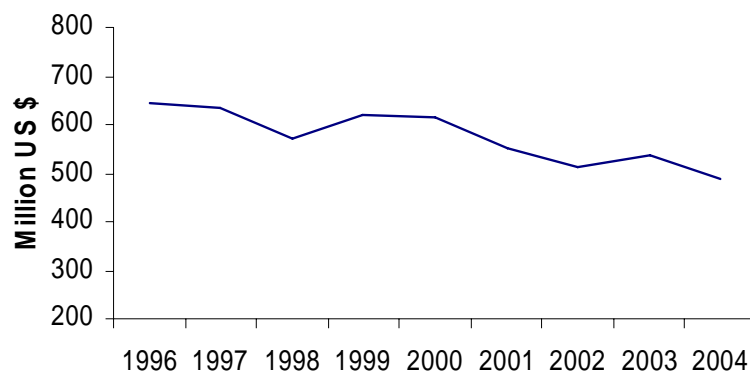


Fig.1 Handmade carpet exports from Iran

The multiple and extensive programming, directed increasing the quality and quantity of the exporting carpets have been conducted during the recent years, which can maintain the full – glorified place of the Iranian carpet within next decades. Because of the noticeable demand to cocoon and silk in Iran for the production of the silk carpets, rugs and the silk handicrafts and also the attachment of farmers to produce cocoon in some cities of Guilan province, cocoon production and silk industry will be continued.

SERICULTURE IN TURKEY



Presented By.
Ayhan KARAGÖZOĞLU
General Manager of Kozabirlik

Present Situation of Sericulture Sector in Turkey

- Around half a million of families are involved in sericulture and silk production activities, and about 2,500 families in 276 villages of 24 Provinces are engaged in cocoon production activities in upper land, where they do not have any alternative cash crops.



- More than 80 percent of the cocoons produced in Turkey are processed into silk carpets, in which about 14 times of added value is created from fresh cocoons to silk carpet production. With annual export of 50-80 tonnes of silk carpets, the total earnings realised around US\$ 25-35 million during 1998-2002.

- Turkey has a huge potential for local silk market development, which still needs annually 200-250 tonnes of raw silk, equivalent to approximately 1,200 - 1,500 tonnes of fresh cocoons. As a result of decrease in cocoon production since 1990s, the country imported about 200 tonnes of raw silk in 2002 and 2003 to meet the domestic demand of silk carpet industries.



- This is why the Government is providing a support for the sericulture sector by paying Direct Income Supporting Fee to the cocoon farmers, which resulted in higher cocoon price since 2002, stimulating the local cocoon production



- The sericulture technology to produce cocoons and raw silk still remains in traditional way, resulting in lower productivity and inferior quality of final silk products than in the other developed sericulture countries.

There were two main organizations involved in sericulture industry up until July 2005: the Sericulture Research Institute (SRI) under the Ministry of Agriculture and Rural Affairs and Kozabirlik, the Union of Sericulture Cooperatives.



The SRI was mainly engaged in research and extension work on sericulture while Kozabirlik's mandate included:

- 1) Maintenance of silkworm genetic resources and production of commercial silkworm eggs,
- 2) Supply of silkworm eggs to farmers
- 3) Extension service and training of sericulture farmers;
- 4) Cocoon purchasing, marketing and market development.



Under a Government decree, the SRI has been merged into Kozabirlik as a research and training branch department since July 2005, enabling Kozabirlik to institutionally handle the entire sector of sericulture industries in the country.

Kozabirlik is now composed of 23 staff and three technicians in the head office in Bursa and five district cooperatives of which the presidents elected by sericulture farmers in every district are the members of managing board, which makes policies and decisions for the operation. The organization is administrated by a general manager who is appointed by the managing board.



In order to revive our silk industry we are already implementing some new measures and policies. First of all Kozabirlik had decided to invest a new silk reeling factory which will start to run in December 2008

In order to catch the international quality standards for the Turkish origin silk yarn Kozabirlik also had taken some new measures for cocoon rearing. First of all with Kozabirlik's application Turkey is now receiving one sericultural project from FAO.



The project was approved in April 2008 and since May 2008 the facilities have been carried out. The project is aiming to strengthening production of silkworm eggs and raw silk in Turkey by providing modern equipments and materials and also technical assistance

Some measures and policies that we must take for increasing the quality of the fresh cocoons in summary:



1) The mulberry trees used for silkworm rearing in most sericulture farmers in Turkey are very old with more than thirty years since planted. The old mulberry plants will be replaced by new trees with applying the pruning system at medium height and with proper fertilization of organic matters. Kozabirlik already started to distributing new mulberry sapplings to the farmers which already reached to amount of 170,000 pcs in the last two years.



2) Since there is only one commercial silkworm variety in the country, it is necessary to introduce new hybrid with resistance to diseases and high productivity. Under the project implementation Turkey will receive two pure races.



3) The larval duration and cocoon production vary with the sericulture farmers, due to mainly the temperature control and management during young silkworm stage (first to third instars). Rearing conditions of young silkworms at farmers' level should be improved by introducing cooperative rearing system at each village. For this reason we already negotiating with the government to create some new funds for building new young silkworm rearing houses in some certain areas of the country.



4) The sericulture farmers who obtained poor cocoon production had improper rearing rooms without cleaning and control management of temperature and humidity. Silkworm rearing rooms of sericulture farms should be maintained in sanitary conditions by cleaning and disinfection. With the help of the FAO project we will set up five demonstration rearing rooms in five villages.



5) The cocoon farmers are using the bushes and tree branches as cocooning frames at the end of silkworm rearing, which induce irregular cocoons with marked cocoon shell. New mounting frames for cocoon spinning will be designed with uniform type manufactured by a mould for plastic to produce quality cocoons. The steel frame for plastic injection will be provided by the end of 2008.

