

CURRICULUM VITAE

Proposed role in the project:

Category:

Staff of :

- | | |
|-------------------------------|----------------|
| 1. Family name: | TZENOV |
| 2. First names: | Panomir Ivanov |
| 3. Date of birth: | 11.10.1961 |
| 4. Passport holder of: | Bulgaria |
| 5. Residence: | Bulgaria |
| 6. Education: | University |

Institution (Date from – Date to)	Degree(s) or Diploma(s) obtained
University of Zootechnics and Veterinary Medicine – Stara Zagora, Bulgaria, 1981-1986	MSc, zootechnics
Academy of Agricultural Sciences, Sofia, Bulgaria, 1996 - 1998	PhD, sericulture

7. Language skills: Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
Bulgarian	Mother tongue		
English	1	1	1
Russian	1	1	1

- 8. Membership of professional bodies:** Black, Caspian Seas and Central Asia Silk Association (BACSA)
- 9. Other skills (e.g. Computer literacy):** Full computer literate
- 10. Present position:** Professor and Director, Academy of Agricultural Sciences, Sericulture and Agriculture Experiment Station, Vratsa, Bulgaria
- 11. Years within the firm:** n/a
- 12. Key qualifications: general sericulture: silkworm breeding, egg production, rearing technology, sericultural economics and management, cocoon and silk processing;**
- 13. Specific experience in the region:**

Country	Date from - Date to
Greece	5 th -10 th April 1998
Ukraine	15 th – 23 rd July 1998
Greece	1 st – 6 th July 2000
Italy, Georgia, Azerbaijan, Uzbekistan	20 th October – 20 th November 2003
Italy	1 st November 2004 – 30 th January 2005
Italy and Uzbekistan	15 th January – 15 th April 2005
Italy and Turkey	1 st February – 30 th March 2006
Greece	10 th – 15 th January 2007
Italy	1 st August – 15 th October 2007
Romania	11 th – 15 th April 2011, 19 th – 24 th April 2015
Italy	7 th – 12 th April 2013

14. Professional Experiences

Date from - Date to	Location	Company& reference person ¹ (name & contact details)	Position	Description
2013, August and September	Kigali, Rwanda	MinAgri, ref.: Mr. J. Gasasira, Project coordinator, e-mail: gasasira@gmail.com	Consultant	International expert to carry out a market opportunity study for the Rwandan silk sector on behalf of Project for Rural Income through Exports (PRICE). After through sericulture value chain evaluation and analyses prepared silk market development strategy .
7 th – 12 th April 2013	Padua, Italy	BACSA, reference person: Dr. E. Kipriotis, Vice-president, e-mail: nagrefk@otenet.gr	Organizer	Italy, organizer of the 6 th BACSA international conference “Building Value Chains in Sericulture” “BISERICA” 2013 , Padua, Italy, April 7 th – 12 th 2013
2012 - continues	Kostinbrod, Bulgaria	Animal Breeding Institute, ref.: Prof. Dr. Maia Ignatova, Director, e-mail: inst_anim_sci@abv.bg	Member	Member of the Scientific council of Animal Breeding Institute , Kostinbrod, Bulgaria under the Agricultural academy Coordinates the research activity in animal breeding in Bulgaria, including sericulture
2011- continues	Bulgaria	Silk Society of India, reference person: Dr. A.D. Jadhav, e-mail: dradjadhav@yahoo.co.in	Member	Advices the Silk Society of India in international relations and cooperation.
11 th – 15 th April 2011	Bucharest, Romania	BACSA, reference person: Dr. E. Kipriotis, Vice-president, e-mail: nagrefk@otenet.gr	Organizer	Romania, organizer of International conference “Sericulture for multi products - new trends for development” and the 5th BACSA meeting, Bucharest.
2008 - 2017	Bulgaria, China	Sericulture and apiculture department, Animal breeding college, Zhedjijang National University, Hangzhou, China, Reference person: Prof. Dr. Y. Miao, e-mail: miaoyq@zju.edu.cn	Head of joint research project	“New and improved methods for mulberry and silkworm breeding and rearing in China and Bulgaria” 2 Chinese F1 commercial silkworm hybrid were tested in Bulgaria, one of them found as appropriate for field adoption.
2010 -	Tbilisi, Georgia	Georgian Academy of Sciences, reference person:	Member	Member of the Editorial board of International scientific journal "Agrarian - Economic Science and Technologies", published in

¹ The Contracting Authority reserves the right to contact the reference persons. If you have any objection to this fact, kindly state so and provide a justification

continues		Prof. G. Nikoleishvili, e-mail: anamaia@mail.ru		Georgia Evaluates the scientific and technical papers, submitted for publication
2010 November	USA	Entogenetics Inc., Charlotte, North Carolina, reference person: Dr. D. Brigham, e-mail: dbrigham@entogenetics.com	Consultant	Entogenetics is a USA company (www.entogenetics.com) dealing with silkworm transgenesis, namely transferring the spider silk gene in the silkworm genome. I consulted them in silkworm breeding, artificial diet feeding and the management in establishing a bigger silkworm rearing facility.
2009 - 2019	Bulgaria, Italy	The Council of Research and Experiments in Agriculture, Apiculture and Sericulture Unit of Bologna, Padua seat, Italy, reference person: Dr. S. Cappellozza, e-mail: silvia.cappellozza@entecra.it	Head of joint research project	“Breeding of silkworm breeds and mulberry varieties and development of technologies for their rearing, suitable for the South – European climatic and agricultural conditions” 2 Bulgarian silkworm breeds were tested in Italy and 2 Italian breeds were tested in Bulgaria. 2 joint Bulgarian-Italian silkworm breeding lines have been created and they are under selection process. 2 new joint F1 commercial Bulgarian-Italian silkworm hybrids were created as project results.
2008 -2010	Albania, Georgia	FAO, reference person: Mr. R. Van Otterdijk, technical officer, e-mail: Robert.VanOtterdijk@fao.org	Consultant	Two FAO TCP facility projects in Albania and Georgia were approved and financed. Those were TCP/ALB 3101 “Revival and Development of Sericulture in Albania” , implemented in 2008 – 2009 and TCP/GEO/3201 “Sericulture sector study in Georgia” , implemented in 2009 – 2010.
2008 March	Bahrain	BACSA, reference person: Dr. E. Kipriotis, Vice-president, e-mail: nagrefk@otenet.gr	Consultant	Survey on the local silk market. The survey aimed to explore new market for the silk products, produced in BACSA member states.
2008	Kharkov, Ukraine	Ukrainian Academy of Agricultural Sciences, Sericulture Research Institute, Meref, Ukraine, ref.: Mr. N. Drobin, President, Ukrainian silk corporation, e-mail: ukrshovk@ukr.net	Professor	Honorary Professor of the Ukrainian Academy of Agricultural Sciences, Sericulture Research Institute, Meref, Ukraine Honorary degree due to big contributions in the bilateral scientific cooperation between Bulgaria and Ukraine in the field of sericulture.
2007 - 2017	Bulgaria, Romania	Institute for Bioengineering, Biotechnology and Environmental Protection –	Head of joint research project	“Implementation of modern methods of sericulture products and wastes processing aiming to obtain new ecological agriculture foods” Research on silkworm rearing wastes composting and utilization. Developed strategy for sericulture products use for non-textile purposes.

		S.C.BIOING SA, Bucharest, Romania, reference person: Dr. M. Ichim e-mail: ichim52@gmail.com		
03.2007 – present	Vratsa, Bulgaria	Sericulture and Agriculture Experiment Station, reference person: Prof. Dr. H. Bozukov, President of Bulgarian Academy of Agricultural Sciences, e-mail: ssa_nauka@agriacad.bg	Director of SAES - Vratsa	Leading and coordinating the whole research, extension and production activity. I guide and coordinate the whole production and trade with almost all sericultural products, such as silkworm eggs, mulberry saplings, artificial diet, dry cocoons, raw silk, silk garment etc.
2007 - 2017	Bulgaria, Japan	Genetic Resources Institute, Kyushu University, Fukuoka, Japan, reference person: Prof. Y. Banno, e-mail: banno2002@eos.ocn.ne.jp	Head of joint research project	“Exchange and evaluation of genetic resources and innovative techniques in sericulture” . 3 silkworm breeds were obtained from Japan and used in Bulgaria in the silkworm breeding. As results 2 new sex-limited for cocoon colour silkworm breeds were created for the first time in Bulgaria. The breeds were used as parents of 2 new F1 hybrids, already recognized by the Bulgarian government and adopted to the field level. The new hybrids allow to decrease the egg production costs by 75 %.
2007 - continues	Bangalore, India	International Sericultural Commission, Bangalore, India, ref.: Ms. Ishita Roy, Secretary general, International sericultural commission, e-mail: iscbangalore@gmail.com	Member	Member of the Editorial board of the international scientific journal “Sericologia” , issued by the International Sericultural Commission Evaluates the scientific and technical papers, submitted for publication
1 st August – 15 th October 2007	Rome, Italy	FAO, reference person: Dr. K.W. Sohn, technical officer, FAO, e-mail: sohnkw@gmail.com	Consultant	FAO consultancy 2.5 months mission on writing a paper on the results of international testing of silkworm hybrids , conducted in 2006/2007 to be presented in the International Conference on “Sericulture challenges in the 21st Century” , and the 3 rd BACSA meeting, Vratsa, Bulgaria, September 2007 and preparing draft documents for organizing/holding and follow-ups of the Conference . 74 days mission duration.
10 th – 15 th January 2007	Komotini, Greece	Agricultural Research Station of Komotini, Greece, ref.: Dr.	Head of joint research project	Joint research project between SES – Vratsa, Bulgaria and ARS – Komotini, Greece on “Study and evaluation of Bulgarian mulberry

		E. Kipriotis, Director, e-mail: nagrefk@otenet.gr		varieties and silkworm hybrids under the Greek Thraki region climatic conditions ” 5 Bulgarian mulberry varieties and more than 20 F1 silkworm hybrids were tested in Greece. As a result in Greece 3 Bulgarian mulberry varieties were adopted to the field level and more than 50 % of the silkworm eggs reared in the country now are imported from SAES – Vratsa, Bulgaria. Before implementing the project in Greece were prevailing local low productive mulberry varieties and they imported silkworm eggs with low quality from China. Presently due to the project implementation the mulberry leaf yield per 1 ha in Thraki, Greece is higher by about 30 % and the cocoon yield by 1 box of eggs is higher by about 50 % than before the project.
2006 – 2008	Sofia, Bulgaria	Academy of Agricultural Sciences reference person: Prof. Dr. Totka Trifonova, President of Bulgarian Academy of Agricultural Sciences, e-mail: ssa_nauka@agriacad.bg	member of the Publishing council at the National Center of Agricultural Sciences, Bulgaria	Member of the Publishing council at the National Center of Agricultural Sciences, Bulgaria Evaluates all the scientific papers, submitted for publication in the Academy’s journals
2006 - 2008	Rome	FAO , reference person: Dr. H. Z. Lea, technical officer, FAO, e-mail: hzeabio@hotmail.com	Consultant	Member of international “ Working group on the global silk handcraft cottage industries and silk enterprises development ” under FAO.
2002 – 2008	Rome	FAO , reference person: Dr. H. Z. Lea, technical officer, FAO, e-mail: hzeabio@hotmail.com	Consultant	Member of international “Working Group on Sericulture Germplasm” under FAO Aims to contribute to the world/regional sericulture germplasm preservation, evaluation, and exchange
2006 – 2007	Sofia, Bulgaria	Academy of Agricultural Sciences, reference person: Prof. Dr. Totka Trifonova, President of Bulgarian Academy of Agricultural Sciences, e-mail: ssa_nauka@agriacad.bg	Executive director of Bulgarian National Center of Agricultural Sciences	Executive director of Bulgarian National Center of Agricultural Sciences (presently Academy of Agricultural Sciences), Sofia, Bulgaria Leading and coordinating the whole research, extension and production activity
2006 - 2010	Bulgaria, Uzbekistan	Uzbek Sericulture Research Institute, Tashkent, Uzbekistan, reference	Head of joint research project	“Exchange of silkworm breeds and mulberry varieties from the germplasm in order to create new highly productive silkworm breeds and hybrids and mulberry varieties” 10 mulberry varieties

		person: Dr. H. Khomidy, e-mail: khomid_khomidy@mail.ru		and 12 silkworm breeds from Uzbekistan were tested in Bulgaria and 5 Bulgarian mulberry varieties and 6 silkworm breeds were tested in Uzbekistan. As project results 2 Uzbek mulberry varieties were adopted in Bulgaria and 1 Bulgarian mulberry variety was adopted in Uzbekistan. 2 new joint F1 commercial silkworm hybrids were created.
1 st February – 30 th March 2006	Rome, Italy, Bursa, Turkey	FAO , reference person: Dr. H. Z. Lea, technical officer, FAO, e-mail: hzleabio@hotmail.com	Consultant	FAO consultancy mission with visits to Rome, Italy and Turkey for a period of 3 months preparing draft documents for organizing/holding and follow-ups of the “International Workshop on Silk Handcrafts Cottage Industries and Silk Enterprises Development in Africa, Central Asia, Europe and Near East”, Bursa, Turkey, 6 -10 March 2006. 62 days mission duration.
2004 - 2010	Bulgaria, Azerbaijan	Sericulture Research Institute, Gandja, Azerbaijan, reference person: Dr. B. Abbasov, e-mail: abbasovb@mail.ru	Head of joint research project	“Development of scientific basis for sericulture improvement in Azerbaijan and Bulgaria” 4 Bulgarian silkworm breeds were tested in Azerbaijan and 4 Azeri silkworm breeds were tested in Bulgaria. As results of the project 2 new joint silkworm commercial F1 hybrids were created and adopted to the field.
2005 – present	Vratsa, Bulgaria	BACSA, reference person: Dr. E. Kipriotis, Vice-president, e-mail: nagrefk@otenet.gr	President of Black, Caspian Seas and Central Asia Silk Association (BACSA)	President of the only one regional NGO, dealing with sericulture/silk industry revival and development in Europe and Central Asia. As President of BACSA, which unifies 16 member countries, since 2005 I’ve been assisting many times our member states in selling/buying different sericulture products , such as dry cocoons, raw silk, silk yarn, silk carpets etc. (please refer to the BACSA web site: www.bacsa-silk.org) Therefore I have a thorough understanding of business and strategic marketing , and I have extensive marketing knowledge and analytical abilities . Hence I have the ability to gauge market trends and plan marketing strategies accordingly .
1 st November 2004 – 30 th January 2005	Rome, Italy	FAO , reference person: Dr. H. Z. Lea, technical officer, FAO, e-mail: hzleabio@hotmail.com	Consultant	FAO consultancy mission with a visit to the FAO headquarters, Rome, Italy for a period of 3 months to collect, review and assess general information and existing data on sericultural industries at the countries in the Black and Caspian Seas Region . Compile the information/data, and identify major constraints against revival and further development of sericulture in the region , and recommend ways and means to alleviate such constraints in the course of rehabilitation of sericultural industries at the regional level .

				Based on the assessment, draft a proposal for periodic workshops for donor search. 86 days mission duration.
15 th January – 15 th April 2005	Rome, Italy, Tashkent, Uzbekistan	FAO , reference person: Dr. H. Z. Lea, technical officer, FAO, e-mail: hzzleabio@hotmail.com	Consultant	FAO consultancy mission with visit to the FAO headquarters, Rome, Italy and Uzbekistan for a period of 3 months to prepare a draft proposal for organizing periodic international workshops and to organize the first one in April 2005 on the regional strategies proposed for revival and promotion of sericultural industries and small enterprise development in the countries of Black, Caspian seas and Central Asia region. The “International Workshop on Revival and Promotion of Sericultural Industries and Small Silk Enterprise Development in the Black & Caspian Seas Region ” was held in Tashkent, Uzbekistan from 11 to 15 April 2005 and the first regional association, called Black, Caspian Seas and Central Asia Silk Association (BACSA) was established. 88 days mission duration.
2003 - 2008	Bulgaria, Romania	Commercial society Sericarom, Bucharest, Romania, reference person: Dr. A. Matei, e-mail: monicamatei47@yahoo.com	Head of joint research project	“Breeding of improved mulberry varieties and silkworm breeds and hybrids and development of technology for industrial cocoon production” Using 15 Romanian silkworm breeds and 10 Bulgarian breeds, 3 new F1 silkworm commercial hybrids were created as project results.
2003 – 2005	Bulgaria, South Korea	National Sericulture and Entomology Research Institute, Suwon, Republic of Korea, Reference person: Dr. Dr. K.S. Ryu, e-mail: ryuks@rda.go.kr	Head of joint research project	“Exchange and testing of silkworm breeds between Bulgaria and Korea” 6 silkworm breeds were received from Korea and further used in creation of 2 new highly productive silkworm breeding populations in Bulgaria.
2003 – continues	Bhubaneswar, India	Indian Academy of Sericulture , Bhubaneswar, India, reference person: Dr. B. K. Nayak, Editor-in Chief, House No.VII-M-88, Shailashri Vihar, Bhubaneswar-751021,	Member	Member of the editorial board of the Indian scientific journal “Bulletin of Indian Academy of Sericulture” .Evaluates the scientific and technical papers, submitted for publication

		Odisha, India		
20 th October – 20 th November 2003	Rome, Italy, Tbilisi, Georgia, Baku, Azerbaijan , Tashkent, Uzbekistan	FAO , reference person: Dr. H. Z. Lea, technical officer, FAO , e-mail: hzeabio@hotmail.com	Consultant	FAO Formulation mission with visits to Rome, Italy, Azerbaijan , Georgia and Uzbekistan for a period of 1 month as expert in the promotion of sericultural industries and small enterprise development in the Black and Caspian seas region , 30 days mission duration.
1994 – 2003	Vratsa, Bulgaria	Sericulture Experiment Station , reference person: Prof. Dr. H. Bozukov, President of Bulgarian Academy of Agricultural Sciences, e-mail: ssa_nauka@agriacad.bg :	Director of SES - Vratsa	Leading and coordinating the whole research, extension and production activity. This station is a state commercial enterprise under the Bulgarian Academy of Agricultural Sciences which produces and trades with almost all sericultural products , such as silkworm eggs, mulberry saplings, dry cocoons, raw silk, silk garment etc. (please refer to our web site: http://ses-vratza.bacsa-silk.org). So, for already 15 years I have handled the production and marketing of all these sericultural products, most of them exported.
2000 – 2002	Vratsa, Bulgaria	Sericulture Experiment Station , reference person: Dr. H. Z. Lea, technical officer, FAO , e-mail: hzeabio@hotmail.com	Project Manager	National director of the project TCP/BUL/0065 “ Rehabilitation of sericulture ”, financed by FAO Project manager, organizing and coordinating the whole project activities. Main project activities and results: Provision of international consultants : 9 visits by 6 consultant in the field of silkworm diseases control, silkworm breeding and egg production, silk reeling and processing, silkworm rearing technology. The consultants provided SES – Vratsa with various relevant advises on effective methods for disinfection of rearing rooms, equipment as well as larval body and beds, control of pebrine disease in the course of silkworm egg production, and earlier diagnosis of NPV and pebrine both at institution and field level. These missions assisted SES in renovating basic infrastructure of silkworm rearing houses and equipment at the SES-Vratsa, and the demofarms and improving silk reeling technology aiming at increasing the raw silk percentage, uniformity and improving cohesion/ cleanness of the silk reeled and silk reeling techniques. A short/long term strategy has

				<p>been established for Bulgarian sericulture development in collaboration with the international consultants and SES.</p> <p>SES' technical and managerial capacity has been strengthened with provision of materials, equipment, recommendations and strategies for rehabilitation of sericultural industry in the country.</p>
2002 September	Bulgaria	<p>FAO, reference person: Dr. H. Z. Lea, technical officer, FAO, e-mail: hzeabio@hotmail.com</p>	Consultant under PSA contract	Preparing country report on the sericulture germplasm in Bulgaria and presenting it at the first international conference on Conservation Status of Sericulture Germplasm of the World, organized and supported by the FAO, Thailand.
1 st – 6 th July 2000	Komotini, Greece	<p>Agricultural Research Station of Komotini, Greece, reference person: Dr. E. Kipriotis, Director, e-mail: nagrefk@otenet.gr</p>	Head of joint research project	Joint research project between SES – Vratsa, Bulgaria and ARS – Komotini, Greece on “ Study and evaluation of Bulgarian mulberry varieties and silkworm hybrids under the Greek Thraki region climatic conditions ”
15 th – 23 rd July 1998	Kharkov, Ukraine	<p>Ukrainian Academy of Agricultural Sciences, Sericulture Research Institute, Merefa, Ukraine, reference person: Mr. N. Drobin, President, Ukrainian silk corporation, e-mail: ukrshovk@ukr.net</p>	Head of joint research project	Joint research project between SES – Vratsa, Bulgaria and Sericulture Research Institute , Merefa, Ukraine on “Breeding of highly productive mulberry varieties, silkworm breeds and hybrids and development of effective technologies for silkworm eggs and cocoons production on industrial basis ”
1998	Egypt	<p>Agricultural company “Agromier”, reference person: Dr. H. Greiss, e-mail: agromier@yahoo.com</p>	Head of joint research project	10 Bulgarian mulberry varieties and 11 F1 silkworm hybrids were tested in Egypt. As a result now in Egypt 1 Bulgarian mulberry variety is adopted to the field level and about 30 % of the silkworm eggs reared in the country are imported from SAES – Vratsa, Bulgaria.
5 th -10 th April 1998	Komotini, Greece	<p>Agricultural Research Station of Komotini, Greece, reference person: Dr. E. Kipriotis, Director, e-mail: nagrefk@otenet.gr</p>	Head of joint research project	Joint research project between SES – Vratsa, Bulgaria and ARS – Komotini, Greece on “ Study and evaluation of Bulgarian mulberry varieties and silkworm hybrids under the Greek Thraki region climatic conditions ”
1995 – 2003	Bulgaria, Ukraine	<p>Ukrainian Academy of Agricultural Sciences,</p>	Head of joint research project	“ Breeding of highly productive mulberry varieties, silkworm breeds and hybrids and development of effective technologies ”

		Sericulture Research Institute, Merefa, Ukraine, reference person: Mr. N. Drobin, President, Ukrainian silk corporation, e-mail: ukrshovk@ukr.net		for silkworm eggs and cocoons production on industrial basis” 3 new Bulgarian – Ukrainian F1 silkworm commercial hybrids were created as results of the project.
1995 – 2003	Bulgaria, Japan	National institute of genetics, Mishima, Japan, reference person: Prof. Y. Banno, e-mail: banno2002@eos.ocn.ne.jp	Head of joint research project	“Genetical problems of the silkworm, Bombyx mori L” 6 silkworm breeds were imported from Japan to Bulgaria and using them 4 new sex-limited for larval markings strains were created.
1989 – present	Vratsa, Bulgaria	Sericulture Experiment Station, reference person: Prof. Dr. H. Bozukov, President of Bulgarian Academy of Agricultural Sciences, e-mail: ssa_nauka@agriacad.bg	Researcher and Professor in SES - Vratsa	Research and extension service in sericulture
1987 – 1989	Vratsa, Bulgaria	Sericulture Experiment Station, reference person: Prof. Dr. H. Bozukov, President of Bulgarian Academy of Agricultural Sciences, e-mail: ssa_nauka@agriacad.bg	Head of the “Silkworm breeding and egg production enterprise”,	Head of the “Silkworm breeding and egg production enterprise”, Vratsa, under the SES – Vratsa. Leading and coordinating the P1 and F1 silkworm egg production for Bulgaria and export to Romania and Serbia
1986 – 1987	Vratsa, Bulgaria	Sericulture Experiment Station , reference person: Prof. Dr. H. Bozukov, President of Bulgarian Academy of Agricultural Sciences, e-mail: ssa_nauka@agriacad.bg	Technologist in silkworm egg production	Technologist in silkworm egg production at the “Silkworm breeding and egg production enterprise”, Vratsa, under the Sericulture Experiment Station (SES) – Vratsa.P1 and F1 silkworm egg production for Bulgaria and export to Romania and Serbia

15. Other relevant information (eg, Publications):

SCIENTIFIC QUALIFICATION:

1989 – Research Officer 3rd degree; 1991 – Research Officer 2nd degree; 1994 – Research Officer 1st degree; 1996 – PhD – sericulture; 1998 – Senior researcher (Associate professor) – sericulture; 2012: Professor – sericulture

ABROAD SPECIALIZATIONS AND TRAINING:

- 1988: Ukraine, Agricultural academy, Sericulture Research Institute, Merefa, Kharkov district, Silkworm egg production enterprise in Mirgorod – 20 days, specialized in the silkworm egg production technology.
- 1995: Republic of Korea, Sericulture and Entomology Research Institute, Suwon, participation at sericulture training course, organized by KOICA – 45 days..
- 2002: Thailand, Bangkok, Ministry of Agriculture, Department of Agricultural Extension, specialization in sericulture management and extension service, 10 days.
- 2002: China, Hangzhou, Zhejiang National University, specialization in training of university students in sericulture, and general sericulture, 10 days
- 2002: South Korea, Suwon and Daegu, Kyung – puck National University, specialization in silk processing and production of ready garment, 10 days.
- 2011: Austria, Vienna, “Agricultural Trade Course for the Europe and Central Asia Region” organized by the World bank, 5 days.

MAIN SCIENTIFIC CONTRIBUTIONS:

- Development methodology of silkworm breeding for higher tolerance to unfavorable rearing conditions. Selection of silkworm breeds and hybrids with higher tolerance to physical stress. Selection of silkworm breeds and hybrids having higher cocoon and shell weight, shell ratio, filament length and raw silk percentage. Author of 6 F₁ commercial silkworm hybrids, authorized by the Bulgarian Government.
- Determining the effect of the genotype and environment on the mulberry leaf ingestion, digestion and utilization in different Bulgarian silkworm breeds and hybrids, the effect of interactions genotype – environment on the phenotypic expression of the genes, responsible for silkworm diapause, the effect of some environmental factors on the silkworm fecundity.
- Investigations on possibilities for producing of compost by the wastes from silkworm rearing, such as mulberry leaf remnants, shoots, branches and silkworm excrements, and establishing a technology for wasteless cocoon production in the sericultural farm.
- Development of a method for determination the balance of nitrogen obtained by 1 ha mulberry plantation, used as a model for improved technologies of obtaining maximal amount of proteins in the form of cocoons and raw silk.
- Created improved labor – saving technologies for silkworm rearing and industrial methods of silkworm egg production. Working out of cottage based technology for cocoon drying, silk reeling and processing.

Developed strategies and concepts for sericulture development:

- Strategy for sericulture in Europe and Central Asia development through improving the raw silk and silk allied products marketing, approved by the FAO.
- Global strategy for silk handcrafts and cottage industries development, approved by the FAO.
- Strategy for silkworm breeding work improvement in Europe and Central Asia for better marketing of the silkworm eggs produced.
- Strategy for sericulture development in the Black, Caspian Seas and Central Asia region countries through products diversification.
- Strategy for sericultural products non – textile use in the Black, Caspian Seas and Central Asia region countries.

GUIDANCE OF BULGARIAN RESEARCH/TECHNICAL NATIONAL PROJECTS: 18 projects, out of them 7 as team leader for the period 1989 – 2012.

PARTICIPATION AT INTERNATIONAL EVENTS:

- 1991: Ukraine, Agricultural academy, Sericulture Research Institute, Merefa, Kharkov district, participation at international conference on the world sericulture industry problems – 7 days
- 1996: Bulgaria, Vratsa, International conference on the occasion of SES – Vratsa 100 years jubilee, September, **organizer**.
- 1998: Ukraine, Agricultural academy, Sericulture Research Institute, Merefa, Kharkov district, participation at international sericultural conference – 7 days
- 1999: Egypt, participation at the 18th congress of the International Sericultural Commission – 7 days
- 2002: (September) Thailand, Bangkok, 19th congress of the International Sericultural Commission & The first international conference on Conservation Status of Sericulture Germplasm of the World, organized and supported by the FAO, participation as invited lecturer, 7 days.
- 2002: Greece, Thessalonica, 7th European congress in entomology, scientific conference: “New prospects of the European sericulture”, participation as invited lecturer, 5 days.
- 2002: Greece, Athens, International sericulture conference, participation with scientific paper as invited lecturer, 4 days.
- 2005: Uzbekistan, Tashkent, FAO consultant in organization of “International Workshop on Revival and Promotion of Sericultural Industries and Small Enterprise Development in the Black, Caspian Seas and Central Asia Region”, Tashkent, Uzbekistan 11 - 15 April 2005, 15 days, **organizer**.
- 2006: Turkey, FAO consultant on the silk handcraft cottage industries and small silk enterprises development and **organizer** of “International Workshop on Silk Handcrafts Cottage Industries and Silk Enterprises Development in Africa, Europe, Central Asia and the Near East & Second Executive Meeting of Black, Caspian seas and Central Asia Silk Association (BACSA)” Bursa, Turkey, 6 -10 March 2006.
- 2006: Romania, Bucharest, participation at the 4th meeting of the Union of European Academies for Science Applied to Agriculture, Food and Nature and visit the commercial society “Sericarom”, 4 days.
- 2007: Japan, Kyushu University and Kyoto University: visit the National silkworm gene bank of Japan, participation with a paper at an international meeting on the global problems of conservation and utilization of silkworm genetic resources, 7 days.
- 2007: Romania, August, Bioengineering, Biotechnology and Environment Protection Institute, Bucharest, participation in an international conference as invited speaker and chairman of section.
- 2007: Thailand, Bangkok, participation as an invited speaker at the Thai Silk Fair 2007, August, 7 days.
- 2007: Bulgaria, Vratsa, International Conference “Sericulture Challenges in the 21st Century” (Serichal 2007), & the 3rd BACSA meeting, held in Vratsa, Bulgaria from 18 to 21 September, **organizer**.
- 2007: Romania, November, visit the University of Agricultural Sciences and Veterinary Medicine, Cluj Napoka and participation at the "36th International Session of Scientific Communications", organized by the University of Agricultural Sciences and Veterinary Medicine, Bucharest, 7 days
- 2008: India, March, participation at the "International Conference on Trends in Seribiotechnology, 27 - 29, March, SK University, Anantapur, India, 7 days
- 2008: Romania, April, participation at the international conference "Sericulture in the 3rd millenium - tradition and modern biotechnology in FP 7", 17 - 18 April, University of Agricultural sciences and Veterinary Medicine, Cluj Napoca, 4 days
- 2008: Romania, participation at the international conference "Exploitation of agricultural and food industry by - products and waste material through the application of modern processing techniques", 1 - 3 July, Bucharest.
- 2008: Greece, participated at the 21st Congress of the International Sericultural Commission, and the 4th BACSA Executive committee meeting, 3 - 6 November, Athens.

- 2009: Romania, participated at the international workshop "Use of sericulture wastes and by products in phytotherapy and other non - textiles purposes", S.C.BIOING S.A., 2-3 April
- 2009: China, participation in the "2009 China International Silk Forum", 18 - 20 October, Hangzhou and visit different sericultural sites in China, 10 days.
- 2010: Thailand, participation at "ASEAN Sericulture Conference 2010 and ASEAN Silk Fabric and Fashion Design Contest 2010", 22 - 27 August, Nontaburi, Thailand, 10 days.
- 2011: Romania, participation at the International conference "Sericulture for multi products - new trends for development" and the 5th BACSA meeting, Bucharest, April, 5 days, **organizer**.
- 2011: Romania, participation in the international workshop "Sericulture and agriculture – strong relationships between Bulgaria, Greece and Romania", September, Bucharest, 3 days.
- 2011: Thailand, participation in 22nd Congress of International Sericultural Commission, 14 – 18 December, Chiang Mai, 10 days.
- 2013: Italy, participation in the 6th BACSA international conference Building Value Chains in Sericulture "BISERICA" 2013, Padua, Italy, April 7th – 12th 2013, **organizer**
- 2014: India, participation in 23rd congress of International Sericultural Commission, Bangalore, 24th - 27th November, Bangalore, 10 days.
- 2015: Romania, organizer of 7th BACSA International conference "Organic Sericulture – Now and the Future" - "ORGASERI" 2015 and 7th BACSA executive committee meeting, Sinaia, Romania, 19th - 24th April , 8 days.

TRAINING OF STUDENTS, FARMERS ETC.:

PhD training as supervisor:

- 1999 – 2011, Mr. J. Lazarov, thesis title: "Study on the possibilities for silkworm, Bombyx mori L. breeds and hybrids, tolerant to unfavorable rearing conditions breeding", Academy of Agricultural Sciences, Sofia, Bulgaria.
- 2009 – 2011, Ms. K. Avramova, thesis title "Possibilities for all the year round providing of silkworm eggs of the mulberry silkworm, Bombyx mori L.", Agricultural University, Plovdiv, Bulgaria.

Sericulture training courses as lecturer and organizer:

- 1999: Sericulture training course, 20 participants from Ministry of agriculture of Libya, place: SES, Vratsa, Bulgaria, duration: 20 days.
- 2003: Sericulture study tour course, 2 participants from Ministry of agriculture of Ghana, supported by the FAO, TCP/GHA/2802, place: SES, Vratsa, Bulgaria, duration: 5 days
- 2007: Sericulture training, 1 person from Ghana, Sericulture Association, place: SES, Vratsa, Bulgaria, duration: 7 days.
- 2010: Sericulture training, 1 person from France, 1 person from Switzerland, Swiss silk association, duration: 4 days.
- 2012: Sericulture training, 1 person from Germany, Dresden Technical University, place: SES, Vratsa, Bulgaria, duration: 7 days.
- 1989 – 2012: Over 50 sericulture 1 – 5 days training courses with Bulgarian farmers, having over 2000 total number of participants.
- 2016 - Sericulture training, 1 person from Georgia, Georgian State Agricultural University, duration: 45 days.

PREPARED INTERNATIONAL AND TCP PROJECTS:

Regional project proposal: "**Improvement of Income-Generation Options Based on Revival of Sericultural Industries and Promotion of Small Silk Enterprise Development in Eastern Europe and Central Asia**". This project proposal was submitted officially to the FAO through the

governments of **Azerbaijan**, Armenia, Bulgaria, Romania, Tajikistan and Uzbekistan.

In the end of 2008 two proposals were prepared by Dr P. Tzenov and Dr S. Cappelozza (Italy) and on behalf of BACSA submitted to FAO, seeking for support to the **regional sericulture germplasm maintenance, evaluation, exchange and utilization**. Those were "**REGIONAL SERICULTURE GERMPASM RESOURCES NETWORK FOR AFRICA, MIDDLE EAST, CENTRAL ASIA AND EUROPE**" and Regional workshop on "Utilization of mulberry and silkworm genetic resources for sericultural enterprises development in Africa, Middle East, Central Asia and Europe".

Project proposals, submitted to the European commission:

"Support for unlocking and developing the research potential of silkworm breeding and innovative management techniques in Bulgaria, Greece and Romania, targeting to the small silk enterprise development" was submitted in 2007 for possible financing by the EU FP 7 "Capacities" Programme, Part 4 Research Potential, Activity Area: "Unlocking and developing the research potential in the EU's convergence regions and outermost regions"

The project proposal SERINNOV– SEE Eol/B/481/1.3/X "Sericulture and silk products in South East Europe - stepping from the tradition to innovation and strengthening the economic profile of respective regions" was submitted to South East Europe Programme – 2nd Call for proposals in 2009.

Project FP7 – KBBE – 2009 – 3 – 5 "EXPLOITATION OF THE HEAVY METAL MOVEMENT AND REMOVAL PATHWAYS AND MECHANISMS IN THE MULBERRY – SILKWORM CHAIN FOR THE ESTABLISHMENT OF MODEL APPLICATIONS FOR FURTHER PRACTICAL USE IN BIO-REMEDICATION OF CONTAMINATED SOILS BIOREMEDIATION"

DANUBE FASHION INSPIRED AND COMFORT CENTERED CREATIVE TEXTILE DESIGN

Proposal acronym: FASHITex

Type of funding scheme: SME-Targeted Collaborative Project

Work programme topics addressed:

FP7 - NMP.2012.4.0-1 "Novel materials and design-based solutions for the creative industry"

Name of the coordinating person: Prof.Xianyi Zeng, ENSAIT

FP7 "People" Programme: Marie Curie Actions

"Initial Training Networks" (ITN)

FP7-PEOPLE- 2010-ITN

Project: Applications of (a)symmetry in animal and plant breeding

NUMBER OF SCIENTIFIC PUBLICATIONS: 200, including 63 abroad, 10 books and monographs, 2 abroad, many popular papers. Author's certificates for new commercial silkworm hybrids: – 7.