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SERICULTURE INDUSTRY IN ROMANIA – ANALYSIS ON CURRENT SITUATION AND PROSPECTS OF DEVELOPMENT

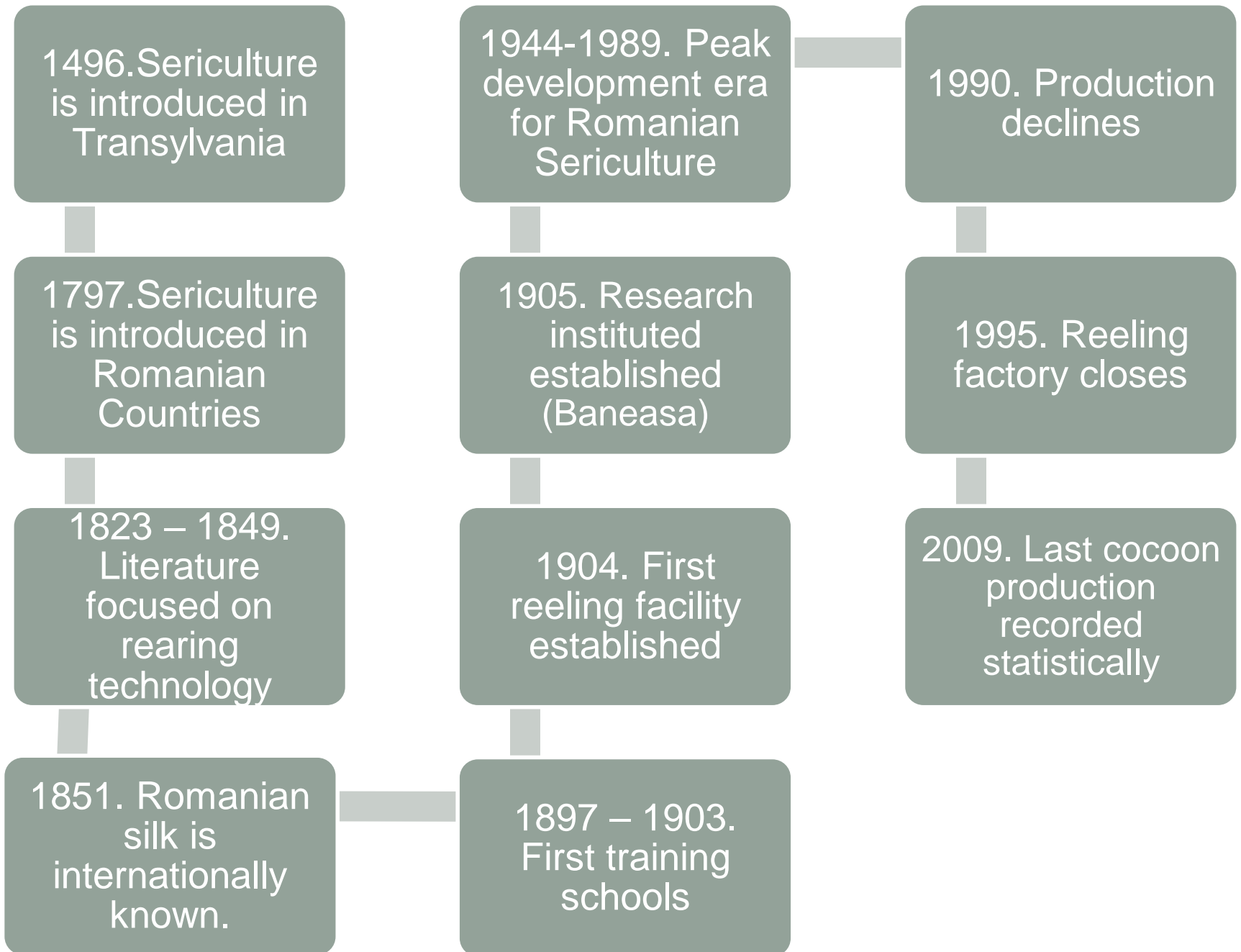
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Introduction

- Sericulture is an industry with a long history (dating back 3000 years) and world wide presence (in over 40 countries).
- Due to scientific and technological progress, silk and derived products are used across many fields.
- In Romania, sericulture is a traditional agro based industry.

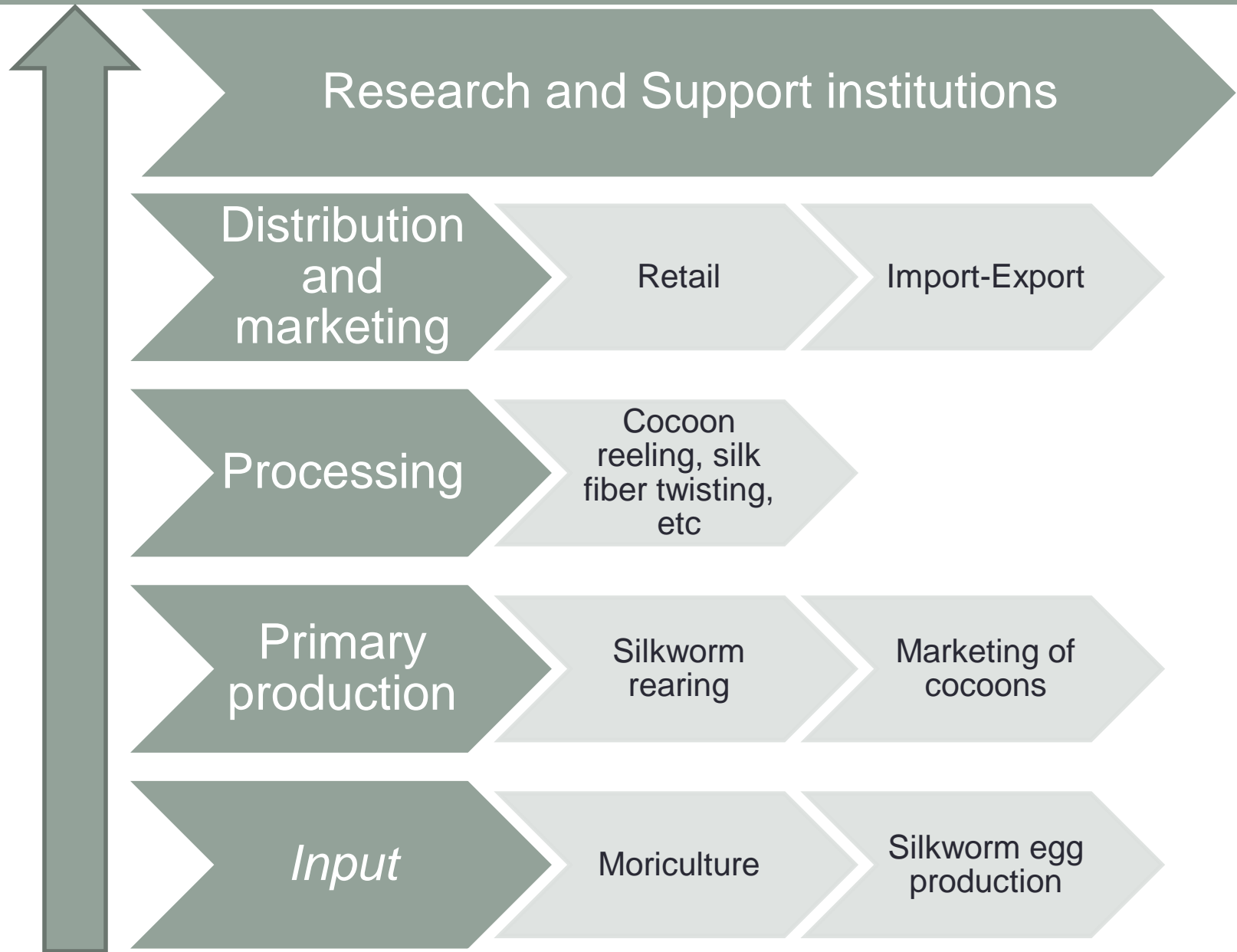


Research objective

- The objective focuses on the analysis of **the current situation of sericulture** in Romania in order to identify development possibilities, at industry level, using the global value chain approach.

Material and Methods

- Scientific literature analysis
- Statistical Data analysis: FAOSTAT , INSSE – Romanian National Institute of Statistics
- The value chain was analyzed using the method proposed by Gerefky et all (2006) and Kaplinsky et all (2012) and the sectors were correlated to sericulture actives, following the development cycle of the silkworms.



Research and Support institutions

Distribution and marketing

Retail

Import-Export

Processing

Cocoon reeling, silk fiber twisting, etc

Primary production

Silkworm rearing

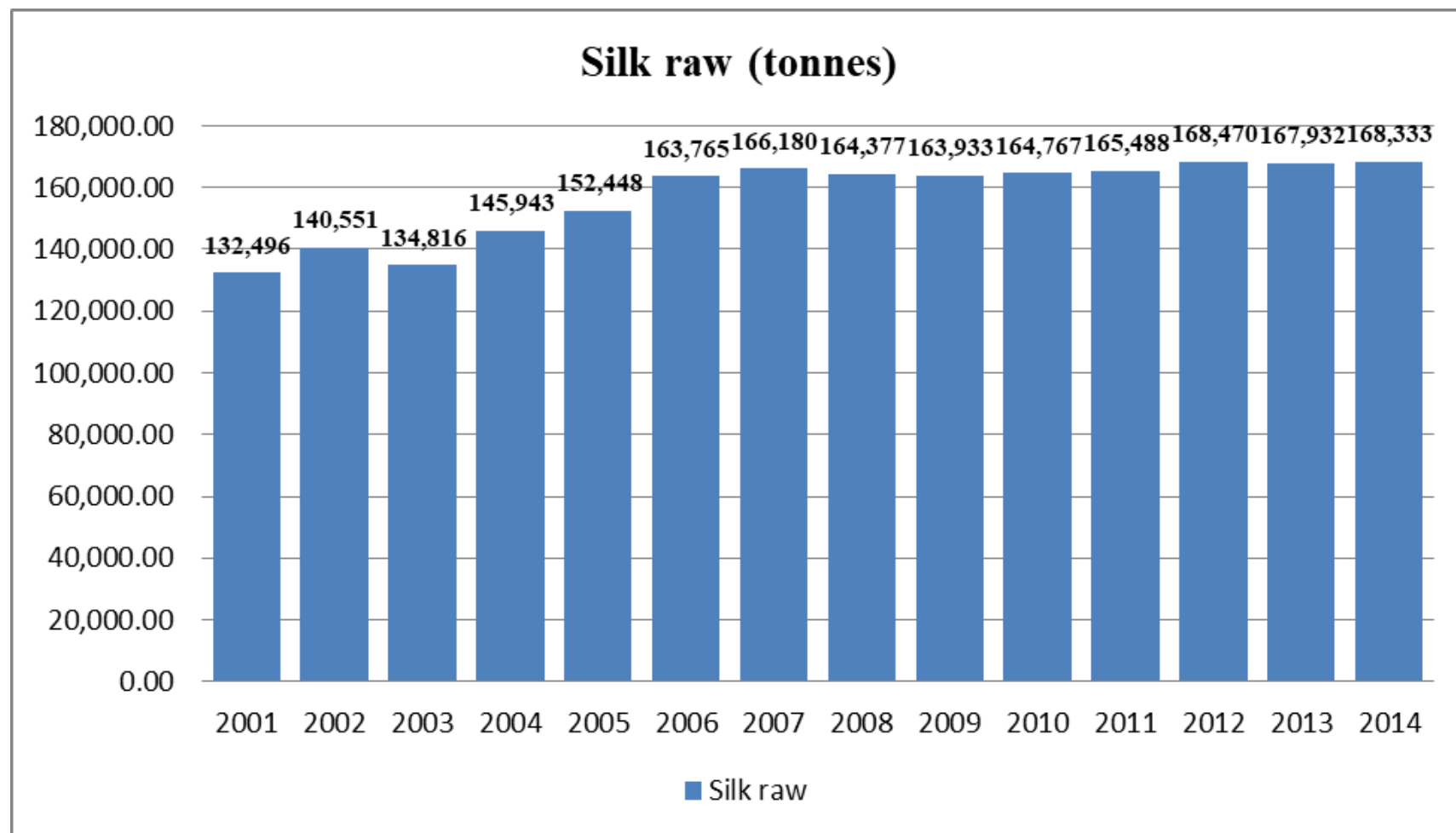
Marketing of cocoons

Input

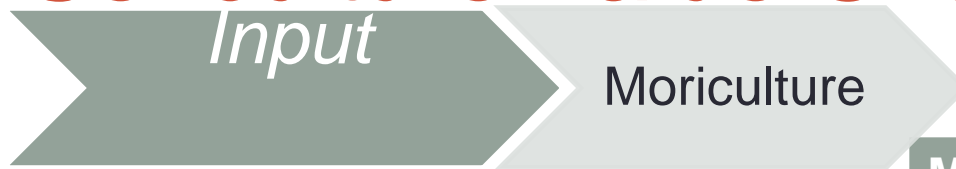
Moriculture

Silkworm egg production

Results and Discussion – World Silk Production



Sericulture Value Chain Analysis



- Most important: *Morus L. alba* and varieties
- Diverse patrimony
 - 10 local breeds
 - 49 foreign breeds
- Most used varieties: Calafat, Galiceea and Basarabi
- Plantation type: bush, middle and high height trunk threes

Mulberry plantation (Ha)	
Year	Hectares
1989	4197
1990	3997
1992	3550
1992	3400
1993	3345
1994	2400
1995	2300
1996	2300
2001	1500
2007	600
2010	321

Source: Pasca et all. 2008



- Rich patrimony containing
 - 64 mulberry silkworm breeds and hybrids.
 - 4 castor oil silkworm breeds
- No commercial silkworm egg production
- Revival of this sector is crucial for the revival of the sericulture industry as local breeds have proven quite productive.

Primary production

Silkworm rearing

- Sericulture is a traditional agro based industry performed in rural areas for rural economy diversification.
- Rearing is performed by few farmers and research centers present in universities.
- Rearing techniques: shelf rearing.



Processing

Cocoon reeling,
silk fiber twisting,
etc

Manufacture Products

- Main Products: silk fabric, included knitted and apparel.
- The production is dependent on import of raw material.
- The increase in production is proof sericulture revival is possible.

Traditional Products

- Silk cocoons are reeled traditionally.
- The thin thread is weaved at manual looms into a thin fabric named **borangic**, used to create decorative objects and traditional costumes.

Silk and silk products	Years								
	2001	2003	2005	2007	2009	2011	2013	2015	2016
Silk cocoons, relable (tones)	1.59	2.20	3.00	1.00	5.00				
Silk Fabric (thousand sqm)	31,831	34,732	22,916	19,773	10,472	9,443	12,085	8,379	8,267
Silk Knitted fabric (thousand sqm)	16,568	18,089	17,352	12,390	8,724	8,733	6,725	7,432	6,200

(source: <http://www.insse.ro/cms/>)

Distribution
and
marketing

Retail

Import-Export

- This sector focuses on actives or retail, import and export in silk products.
- The import sector gained traction as silk manufacture industry is dependent on imported raw material, as local industry has declined/
- Main import partners: Italy, Germany, China.
- Main export markets: Italy, China, Bulgaria, Germany and Greece.

Silk and silk products. Import.	Romania's Imports from the world								
	2001	2003	2005	2007	2009	2011	2013	2015	2016
	Thousands EURO								
Silkworm cocoons reelable	1	:	1	:	:	:	1	:	7
Raw silk (not twisted)	2,786	6,776	19,212	30,038	13,216	42,692	64,777	59,398	76,984
Silk waste	:	:	4	54	188	249	49	161	125
Silk yarn (other than silk waste yarn), not put up for retail sale	37	810	5,670	10,224	3,938	5,101	5,876	6,302	5,785
Yarn of silk waste, not put up for retail sale	:	1	12	108	60	288	494	1,382	971
Silk yarn or silk waste, for retail sale; hair of Messina. Silk fabrics or silk waste	17	34	57	75	46	30	86	24	49
Silk or silk waste fabrics	3,105	5,757	12,842	17,363	13,938	19,229	20,069	17,202	19,925

(source: <http://www.insse.ro/cms/>)

Silk and silk products. Export	Romania's Exports to the world								
	2001	2003	2005	2007	2009	2011	2013	2015	2017
	Thousands EURO								
Raw silk (not thaw)	26	3,141	9,384	3,879	2,205	5,557	5,760	7,591	6,507
Silk waste	:	:	3	:	8	47	:	:	6
Silk yarn (other than silk waste yarn), not put up for retail sale	2,826	6,088	9,524	29,876	22,795	37,935	52,657	60,191	58,439
Yarn of silk waste, not put up for retail sale	:	:	2	:	3	22	39	856	420
Silk yarn or silk waste, for retail sale; hair of Messina Silk fabrics or silk waste	:	:	:	:	:	9	3	4	:
Silk or silk waste fabrics	231	1,422	7,856	12,940	5,743	7,487	11,417	11,957	12,207

(source: <http://www.insse.ro/cms/>)

Research and Support institutions

• National Level

- Minister of Agriculture and Rural Development
- University of Agricultural Sciences and Veterinary Medicine
- Reference Center for Advanced Research in Sericulture and Silk Production Promotion
- Institute for Bioengineering, Biotechnology and Environmental protection
- The National Research and Development Institute for Textiles and Leather,

• International Level

- Organization with name Black, Caspian Seas And Central Asia Silk Association (BACSA)
- International Sericultural Commission

Development Directions

- A national targeted plan focused on:
 - Connecting the value chain segments
 - On revival of the silkworm rearing stage (missing link).
 - Preservation of local mulberry varieties and silkworm breeds.
 - Research projects focused on increased productivity.
 - Implement of silkworm rearing under farmer associations
 - Further development of silkworm rearing technologies, including silk and silk cocoon processing.
 - Income increase can be supported by processing and marketing of secondary products.

Conclusions

- Sericulture is a rational agro based industry with development potential in current times.
- Romania, from an important silk producer and exporter, has mainly become a consumer, with a focus on textile and apparel production.
- Main focus of a potential development strategy should target the revival of silkworm rearing and connect it to the rest of the existing infrastructure.

THANK YOU FOR YOUR
ATTENTION
