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AN OUTLINE OF THE INDIAN RAW SILK PRODUCTION FROM GLOBAL PERSPECTIVE

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ABSTRACT

The sericulture industry is an agro-based cottage industry. In rural areas this industry creates income and employment opportunities for millions of people. This industry can be considered as one of the tools for the development of rural economy of developing countries. In view of this possibility, the present paper seeks to focus on the trend of global raw silk production levels and to explain a comparative character of Indian raw silk production trends with global production trends. Secondary data has been used to meet the objectives of this study. Analysis of secondary data by well-known statistical technique reveals the fact that China and India are the largest producers of silk worldwide. China is in the first place and India is in the second place. China produces almost 78% of the world's raw silk production and on the other hand India produces about 18%.Studies from 2010 to 2020 has shown that there is a declining trend in raw silk production in the world. As silk production in China has been steadily declining in the last few years, perhaps for the reason the world's total silk production has also been steadily declining. Over the study period 2010-2020, India occupied a good position in terms of continuous growth of raw silk production. Under these circumstances, India has a bright future ahead of it in terms of increasing global raw silk production.

KEYWORDS: *Sericulture Industry, Raw Silk Production, world raw silk production, trends of raw silk production.*

INTRODUCTION

Modern human civilization is diverse. This variety includes various cottage industries. Which has been going on continuously in human civilization for ages? One of these cottage industries is the silk industry. It is one of the most popular and oldest cottage industries in the world. The silk industry is an industry that is not limited to one country but is spread all over the world. Economically, the importance of this industry is immense, especially in the case of rural development. No conclusive information has been found as to when and where silk originated, but according to the historical data available and the research of various researchers, it is estimated that the silk was originated in China. According to Chinese mythology, silkworms were first discovered around 2640 BC by Si-Ling-Shi wife of the emperor Huang-Ti (Manisha Bhattacharyya, 2015) **[1].** Although there is disagreement among researchers on this point. According to many researcher, the first silk originated in the

foothills of the Indian Sub-Himalayas. Currently, a total of four types of natural silk are produced in the world, namely Mulberry, Tassar, Eri and Muga. Mulberry is the most widely produced silk. Mulberry accounts for the lion's share of total silk production. At present, many countries are directly and indirectly involved in the sericulture industry and China and India are the largest producers of raw silk in the world. China produces about 78% of the world's raw silk and India produces 18%. **[2]**

THE OBJECTIVE OF THE STUDY

(a)The current picture of Indian silk production has been highlighted.

(b) The picture of global silk production has been highlighted.

(c) The economic aspect of the silk industry is shown.

DATABASE AND METHODOLOGY

The present work is based on secondary data. The secondary data is collected by published sources such as Journals, thesis, books, annual reports, websites, etc. The study period covers from 2010 to 2020.This study analyses the dynamics of raw silk production in major silk-producing countries around the world. The major silk-producing countries are China, India, Japan, Brazil, Republic Korea, Vietnam, Uzbekistan, and Thailand. These countries have been given priority over the amount of raw silk production. To examine the objectives of study data were analysed by using- mean, Standard deviation (S.D), Coefficient of variance (C.V), and Compound average growth rate (CAGR).

INDIAN SCENARIO OF RAW SILK PRODUCTION

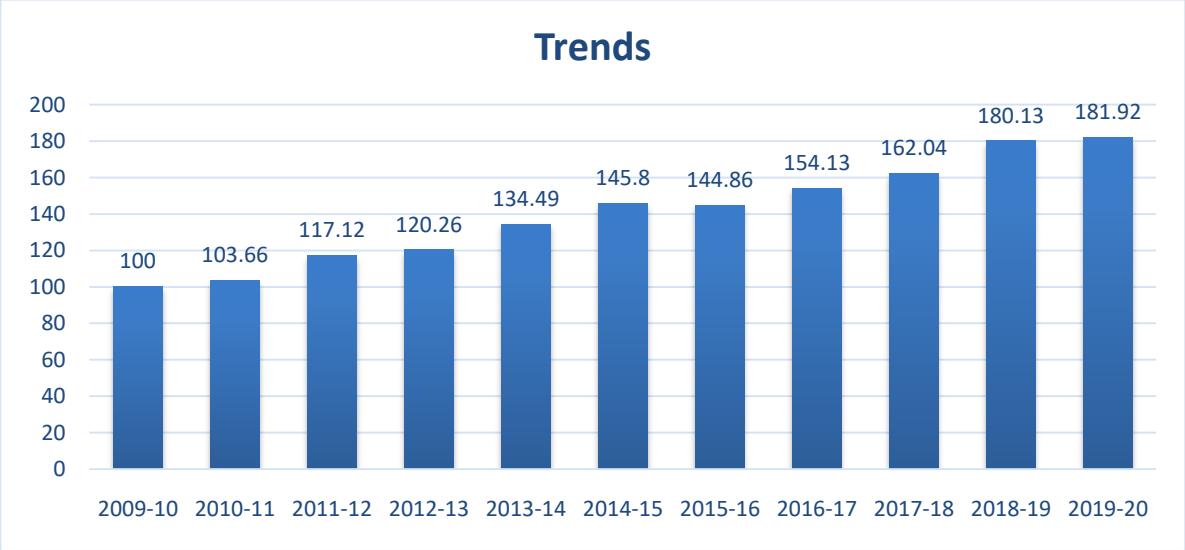
TABLE1: VARIETY WISE RAW SILK PRODUCTION IN INDIA IN METRIC TONS (MT) FROM 2009-10 TO 2019-20

Year	Raw silk Production in MT					Trends
	Mulberry	Tasar	Eri	Muga	Total	
2009-10	16322	803	2460	105	19690	100
2010-11	16360	1166	2760	124	20410	103.66
2011-12	18272	1590	3072	126	23060	117.12
2012-13	18715	1729	3116	119	23679	120.26
2013-14	19476	2619	4237	148	26480	134.49
2014-15	21390	2434	4726	158	28708	145.80
2015-16	20478	2819	5060	166	28523	144.86
2016-17	21273	3268	5637	170	30348	154.13
2017-18	22066	2988	6661	192	31906	162.04
2018-19	25345	2981	6910	233	35468	180.13
2019-20	25239	3136	7204	241	35820	181.92
Mean	20448.73	2321.18	4713	162		
S.D	2916.09	815.44	1655.87	42.97		
C.V	14.26%	35.13%	35.14%	26.53%		
CAGR	4%	15%	11%	9%		

Source: http://csb.gov.in/wp-content/uploads/2021/08/Raw-Silk-Production-Statistics.pdf [3]

Comparison between four types of silk in this period, much important information is released. Here some statistical tools are used to review the movement of four types of silk. It has been said before that mulberry silk is the first place in the production of silk and here the mean value and S.D value of mulberry silk is more than the rest of the silk which clearly states that mulberry silk is ahead in silk production. The value of the coefficient of variance is low for mulberry silk (14.26%) that's means the mulberry silk production is more consistent compared to other silk, followed by muga (26.53%), tasar (35.13%), and eri (35.14%). The CAGR value is higher in the case for tasar silk production about 15% which means tasar silk production increased about 15% per annum over the period and followed by eri(11%), muga(9%), and mulberry (4%). Although the mulberry silk is ahead in silk production annual production growth rate over the period is comparatively low to the other silk production

Figure 1 Shows the Trends Of Raw Silk Production From 2009-10 To 2019-20



Source: Table No. 1

Figure 1 represents the trends of total raw silk production during the period from 2009-10 to 2019-20. The total raw silk production in India has gradually increased during this specific time period. Total raw silk production in 2009-10 was 19690 MT and in 2010-11 the total raw silk production has increased to 3.66% and in 2012-13 the total raw silk production again increased to 13.46% and from then until 2014-15, the production of raw silk industry has been steadily increasing and the year 2015-16 total raw silk production again decreased by 0.94% and it again increased by9.27 % in 2016-17 and the next year it increased by 7.91% and in the year 2018-19, it has increased dramatically by 18.09% and in the last year, it increased by only 1.79%.

INDIAN POSITION IN GLOBAL SCENARIO

Silk is a highly addictive product and its importance is always comparatively greater than any other textile fiber in human history. The importance of the silk industry is not only for its beauty but also for its economic importance. Since it is a rural-based cottage industry, so this

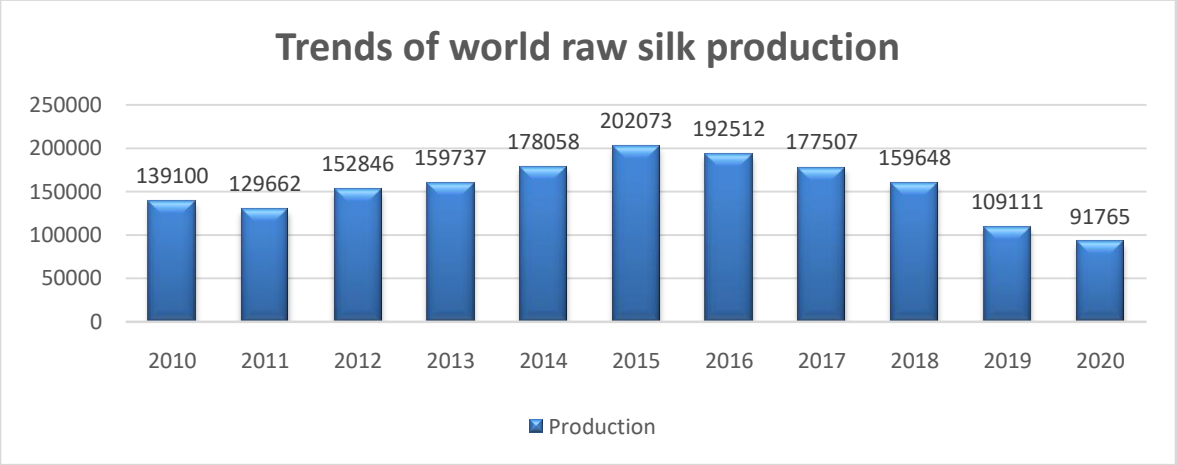
industry canbe creating additional employment opportunities in rural areas and has played a significant role in improving the rural economic condition by generating additional income sources in rural areas. So many developing countries have adopted the sericulture industry and are using it as a development tool. The major silk-producing countries are China, India, Japan, Brazil, Republic Korea, Thailand, Vietnam, Bangladesh, etc. Although sericulture activities are practiced all over the world Asian countries are the major producer of raw silk in the world with more than 90 percent raw silk of total global output contributed by Asian countries. Today China and India are the main producers, together with manufacturing lion-share of world raw silk production. China ranks first in the world's total silk production and India is second. Although India ranks second in silk production, India's share in total silk production is relatively lower than China's, which is almost surprising.

TABLE 2 COUNTRY WISE AND YEAR WISE RAW SILK PRODUCTION FROM 2010 TO 2020 UNIT: METRIC TONS (MT)

Year	Major raw silk-producing countries						
	China	India	Brazil	Uzbekistan	Thailand	Vietnam	Total
2010	115000	20410	770	940	655	550	138505
2011	104000	23060	558	940	655	500	129684
2012	126000	23679	614	940	655	450	152868
2013	130000	26480	550	980	680	475	159737
2014	146000	28708	560	1100	692	420	178058
2015	170000	28523	600	1200	698	450	202073
2016	158400	30348	650	1256	712	523	192512
2017	142000	31906	600	1200	680	520	177507
2018	120000	35261	650	1800	680	680	159648
2019	68600	35820	459	2037	700	795	109111
2020	53359	33770	377	2037	520	969	91765
Mean	121214.5	28905.91	580.73	1311.81	666.09	575.64	
S.D	33869.16	4886.70	97.93	414.28	49.76	162.90	
C.V	27.94%	16.91%	16.86%	31.58%	7.47%	28.30%	
CAGR	-7%	5%	-7%	8%	-2%	6%	

Source: http://www.ctrtiranchi.co.in/pdf/TASAR%20STATISTICS.pdf and https://inserco.org/en/statistics

Figure 2: Trends of word raw silk production from 2010 to 2020



Source: Table 2

Table 1 gives the status of world raw silk production of major silk-producing countries of the world. From 2010 to 2015, the world's total raw silk production has been steadily increasing, and during this period, raw silk production has increased by about 45.27%. Global silk production has been steadily declining since 2016. In 2016 silk production decreased by 4.73% and in 2017 it decreased by 7.79% and in 2018 it again decreased by 10.06% and in the years 2019 and 2020 silk production further decreased by 31.66% and 18.90% respectively. The mean score and S.D show that among the countries, the production of raw silk is high in China, the mean production and S.D of China is 121214.50 MT and 33869.16 respectively. From the above table, it is clear that India is the second-largest producer after China in terms of mean value and S.D. The mean production of India is 28905.91 MT and S.D is 4886.70 respectively. The growth rate was not the same for all the leading producers. Comparing the percentage increases in raw silk production over the mentioned period, Uzbekistan records an increase of 116.70%, whereas in the case of India it is 65.46% and for Vietnam, it is 76.18%. Countries like China, Brazil, and Thailand show a declining trend in silk production over this specific period. During this period, the volume of silk production in China and Brazil declined significantly, i.e, 53.60% and 51.04% respectively. **[4]**

FINDINGS OF THE STUDY

The findings are expressed pointwise for clarity of this discussion.

1. In 2010 the production of raw silk in China was 115000 MT and in 2020 the production volume decreased to 53359 MT. During this period total, raw silk production in China decreased about 53.60%. The value of CAGR is -7%, which means on average raw silk production is decreased by 7% per annum over the period.
2. In 2010 the production of raw silk in India was 21005 MT and in 2020 the production volume increased to 33770 MT. During this period total, raw silk production in India increased by about 60.77%. The value of CAGR is 5%, which means on average raw silk production is increased by 5% per annum over the period.

3. In 2010 the production of raw silk in Brazil was 770 MT and in 2020the production volume fall to 377 MT. During this period total, raw silk production in Brazil decreased by about 51.04%. The value of CAGR is -7%, which means on average raw silk production is decreased by 7% per annum over the period.
4. In 2010 the production of raw silk in Uzbekistan was 940 MT and in 2020 the production volume increased to 2037 MT. During this period total, raw silk production in Brazil increased by about 116.70%. The value of CAGR is 8%, which means on average raw silk production is increased by 8% per annum over the period.
5. In 2010 the production of raw silk in Thailand was 655 MT and in 2020 the production volume fall to 520 MT. During this period total, raw silk production in Thailand decreased by about 20.61%. The value of CAGR is -2%, which means on average raw silk production is decreased by 2% per annum over the period.
6. In 2010 the production of raw silk in Vietnam was 550 MT and in 2020 the production volume increased to 969 MT. During this period total, raw silk production in Vietnam increased by about 76.18%. The value of CAGR is 6%, which means on average raw silk production is decreased by 6% per annum over the period.
7. It was found that among the countries, China ranks first in the production of raw silk with a mean value of 121214.50, followed by India (28960), Uzbekistan (1311.81), Thailand(666.09), Brazil (580.73), and Vietnam(575.64).
8. It was found that among the countries, India ranks first in the consistency of growth of raw silk production as it shows as 16.56%, followed by Vietnam(28.30%) and Uzbekistan(31.58%), as shown by the Coefficient of variance.

CONCLUSION

India is the only country in the world that produces all four varieties of natural silk.At present, India is one of the world's leading producers of raw silk after China. The silk industry is a village based industry and in rural areas it provides income and employment opportunities to a large number of people. Currently, the main and most important problem in India is unemployment and poverty. A large part of this poverty and unemployment can be seen in rural areas. It is possible to solve this problem through development and expansion of sericulture industry in rural areas. The demand for natural silk in the world market is quite high and its demand is constantly increasing in developed countries. In the present era, production of natural silk has been steadily declining in almost all countries except India, Uzbekistan and Vietnam. In addition, the production of silk has increased in those countries, it has to a very negligible amount. India now has a golden opportunity to increase its production and at the same time increase its dominance in the world silk market. In this contest, if India increases its natural silk production, its export earnings will also increase, which will lead to the development and expansion of the silk industry, which will increase employment in the country and poverty will be reduced to some extent. **[5,6,7]** In conclusion, the silk industry should not be analysed only from an economic point of view. It is not just a weapon of economic development. Rather, this art is an Indian tradition with which Indian culture is intertwined. This rural cottage industry is a cultural feature of India.

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