Studies on Constraints Faced by Different Types of Silk Reelers in Traditional Area of Tamil Nadu

D. Elumalai[1*], K. Uma[2], M. Anjugam[3], G. Umapathy[4] and P. Balaji[5]

[1, 2 &4]Department of Sericulture, Forest Collage and Research Institute,
Mettupalayam, Coimbatore, Tamil Nadu, India
[3]Department of Agricultural Economics,
[5]Department of Agricultural Rural Management,
Agricultural Collage and Research Institute, Coimbatore, Tamil Nadu, India
*Corresponding Author E-mail: elu8032@gmail.com

ABSTRACT

The present study is an endeavor to constraints faced by different types of silk reelers in traditional area of Tamil nadu all the way through structured survey during 2017-18. The study total sample was 40. The study area major problems indicated that price of changeability cocoon and raw silk, inferior quality of cocoon, poor quality of water and long distance of transportation was recoreded. Besides, labour is another important factor which includes crucial elements like shortage of skilled labour especially women labour and also prohibition of child labour. Further extension hard work, the government must come push to help the cottage, charka and filature units to change over to advanced technologies like automatic and multi-end technology by provided that financial support to acquire requisite training and establish improved units. The other important problem is government policies as reelers are not aware of imports of silk from china, changes in import tariffs and lack of remunerative price for domestic silk.

Key words: Constraints, Silk industry, Different of silk reelers.

INTRODUCTION

India has the sole peculiarity of producing all the four types of silk varieties *viz.*, mulberry, tasar, eri and muga. With the four different types of silkworms reared in India, *Bombyx mori* feeds on the leaves of *Morus* to produce the best quality of raw silk. Sericulture is an agro based cottage based industry in the country. Sericulture industry has been given that sustainable profit for different strata of people in the rural people including the landless[1]. Silk is a natural fibres protein of fibroins (inner layer) called brins are completely covered with sericin (outer layer). Silk is one of the most ancient textile fibres and it accounts for only 0.2 per cent of the total textile fibres available in the world. Even then, due to its luster, elegance and versatility, silk is considered as the queen of textiles[2].

Sericulture industry is a major portion of revenue getting by main producers, i.e., farmers (54.6%), followed by the traders (17.8%), weavers (12.3%), twisters (8.75), and reelers (6.6%)[3]. Sericulture plays an essential role in makeover of rural economy as it assures continuous employment and periodic income round the all year[4].

MATERIAL AND METHODS

The survey was conducted in Krishnagiri, Dharmapuri, Salem and Tiruppur district of Tamil Nadu to find out the constraints faced by charka, multiend, automatic and cottage reelers. The total of 40 sample farmers were selected randomly and Primary data were collected using well structured and pre- tested interview schedule by personal interview. Garrett's ranking techniques was adopted to analyse the problems faced by silk reelers (charka, multiend, automatic and cottage). The respondents were asked to rank the given factors that were limiting the procurement of cocoon, processing and the problems in marketing.

The order of merit thus given by the respondents was converted into ranks using the following formula

$$\text{Percent position} = \frac{100 (R_{ij} - 0.5)}{N_j}$$

Where

R_{ij} = Rank given for i[th] factor by j[th] individual.

N_j = Number of factors ranked by j[th] individual.

From the Garrett's table, the per cent positions anticipated were calculated into scores. Therefore for each aspect, the scores of the diverse respondents were additional and the mean score was estimated. The means consequently obtained for each of the attributes were arranged in descending order. The attributes with the maximum mean score was measured as the most significant one and the others followed in that order. The per cent site of each rank thus obtained was rehabilitated into scores by referring to tables given by Garrett.

EXPERIMENTAL RESULTS

The results of the presents study as well as relevant discussions have been presented under following sub titles.

3.1. Problems in cocoon procurement faced by the reelers of different reeling units

S.No	Problmes	Charka Reeling		Cottage Reeling		Multiend Reeling		Automatic Reeling	
		Garett score	Rank	Garett score	Rank	Garett score	Rank	Garett score	Rank
1	Fluctuation in cocoon prices	444	I	744	I	1434	I	144	I
2	Absence of quality cocoons	411	II	560	II	1347	II	134	II
3	Poor information of market	349	III	516	III	1209	III	96	IV
4	Poor market facilities	306	IV	498	IV	1010	IV	107	III
5	Non- availability of space to store cocoons	253	V	359	V	859	V	57	VI
6	Long transportation	191	VI	345	VI	643	VI	92	VI
7	Delay in cash payments	158	VII	246	VII	531	VII	52	VI

Fig 3.1.Problems in cocoon procurement faced by the reelers of different reeling units
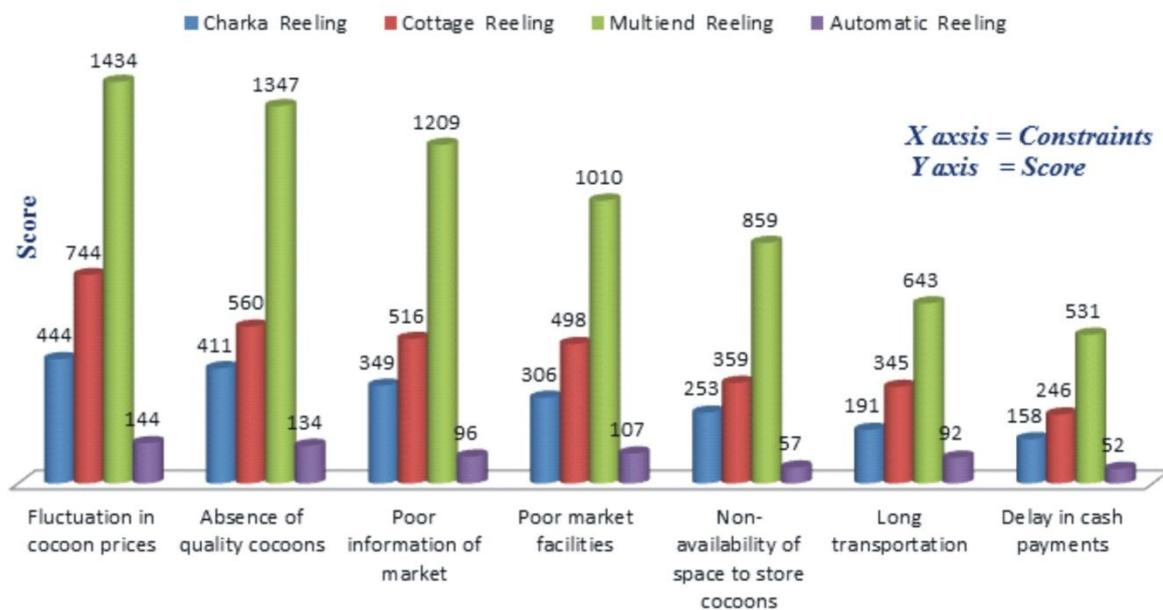
3.1. Problems of cocoon procurement faced by the reelers

The constraints of cocoon procured in charaka, cottage basin and multi-end basin and automatic reelers results are presented in Tables 3.1 & Fig 3.1. Charaka unit had seven factors, fluctuation in cocoon prices with a total score of 444. So this problem got assigned first rank, followed by absence of quality based cocoons, poor information of market, poor market facilities, non-availability of space to store cocoons, long transportation, and delay in cash payments. In cottage basin units had seven factors, fluctuation in cocoon prices with a total score of 744. So this problem got identified in first rank, followed by absence of quality based cocoon, poor information of market, poor market facilities, non-availability of space to store cocoons, long transportation, and delay in cash payments. In multiend basin units had seven factors, fluctuation in cocoon prices with a total score of 1434. So this trouble got assigned first rank, followed by absence of quality based cocoons, poor information of market, poor market facilities, non-availability of space to store cocoons, long transportation, and delay in cash payments. In automatic basin units had seven factors, fluctuation in cocoon

prices with a total score of 144. So this constraints got assigned first rank, followed by absence of quality based cocoons, poor market facilities, poor information of market, long transportation, non-availability of space to store cocoons and delay in cash payments.

3.2. Processing problems faced by the reelers

The processing problems of charaka, cottage basin, multi-end basin and automatic reelers results are presented in Tables 3.2 & Fig 3. 2. Charaka unit had eight factors considered; poor quality of cocoons with a total score of 436. As a result this problem got assigned first rank, followed by good water/reeling water, scarcity of labour, high labour cost, lack of technical guidance, high cost of silk reeling machines, non -availability of electricity and non-availability of fuel. Cottage unit had eight factors considered; poor quality of cocoons with a total score of 712. As a result this problem got indicated that first rank, followed by good water/reeling water, scarcity of labour, high labour cost, lack of technical guidance, high cost of silk reeling machines, non- availability of electricity and non-availability of fuel. Multiend unit had eight factors considered; poor quality of cocoons with a total score of 1404. Therefore these

constraints got estimated that first rank, followed by good water/reeling water, scarcity of labour, high labour cost, high cost of silk reeling machines, lack of technical guidance, non-availability of fuel, and non availability of electricity. Automatic unit had eight factors considered; poor quality of cocoons with a

total score of 148. Hence these constraints got assigned first rank, followed by scarcity of labour, good water/reeling water, lack of technical guidance, high labour cost, high cost of silk reeling machines, non-availability of fuel, and non availability of electricity.

Table 3.2. Processing problems faced by the reelers of different reeling units

S.No	Problmes	Charka Reeling		Cottage Reeling		Multiend Reeling		Automatic Reeling	
		Garett score	Rank	Garett score	Rank	Garett score	Rank	Garett score	Rank
1	Poor quality cocoons	436	I	712	I	1404	I	148	I
2	Good water/reeling water	412	II	688	II	1360	II	128	III
3	Scarcity of labour	374	III	646	III	1328	III	140	II
4	High labour cost	326	IV	533	IV	1051	IV	87	V
5	High cost of silk reeling units	219	VI	353	VI	808	V	80	VI
6	Non- availability of electricity	180	VII	337	VII	709	VIII	53	VI
7	Non- availability of fuel	178	VIII	243	VIII	779	VI	53	VI
8	Lack of technical guidence	248	V	434	V	739	VII	106	IV

Fig 3.2. Processing problems faced by the reelers of different reeling units
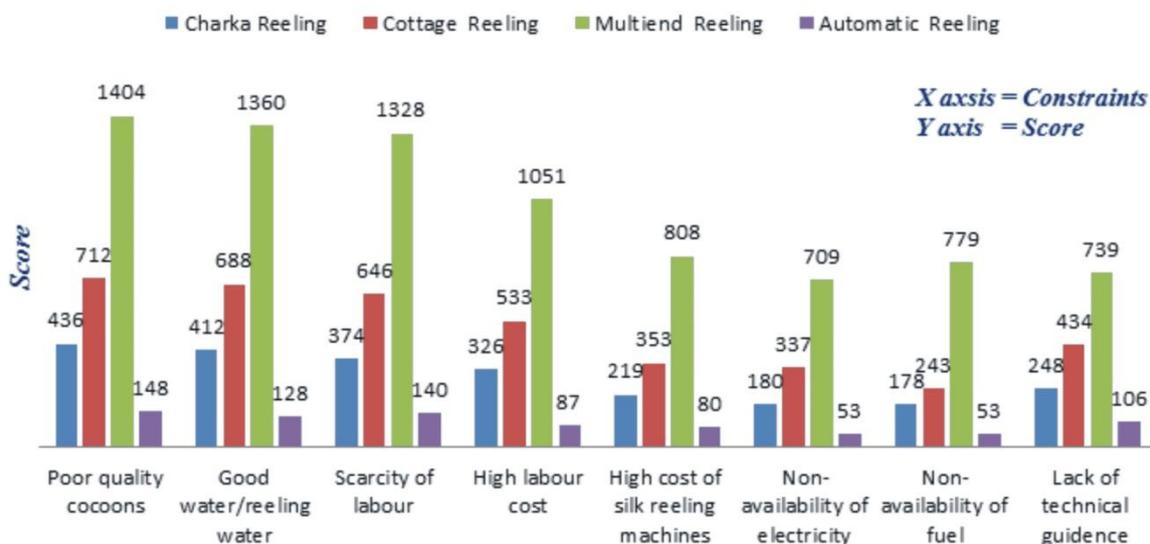
Table 3.3. Marketing problems faced by reelers of different reeling units

S.No	Problmes	Charka Reeling		Cottage Reeling		Multiend Reeling		Automatic Reeling	
		Garett score	Rank	Garett score	Rank	Garett score	Rank	Garett score	Rank
1	Fluctuation in silk prices	456	I	736	I	1488	I	148	I
2	Non-availability of market information	376	III	633	III	1210	III	140	III
3	Inadequate storage facility	159	VIII	340	VII	565	VII	72	VII
4	Inadequate market facility	252	VI	367	VI	793	VI	87	IV
5	No demand in market	167	VII	243	VIII	558	VIII	42	VIII
6	Import silk	287	V	494	V	981	V	85	V
7	Delay in cash	293	IV	512	IV	1018	IV	80	VI
8	Transportation problems	404	II	676	II	1388	II	142	II

Fig 3.3. Marketing problems faced by reelers of different reeling units

■ Charka Reeling   ■ Cottage Reeling   ■ Multiend Reeling   ■ Automatic Reeling

X axis = Constraints
Y axis = Score
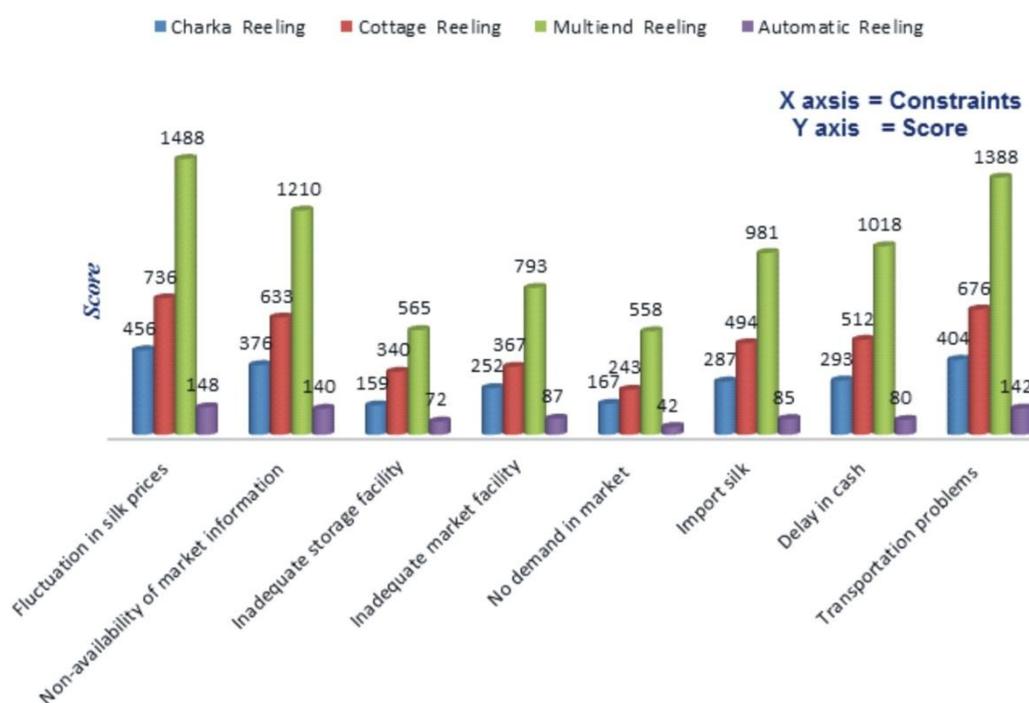
3.3. Marketing problem faced by the reelers

The Marketing problems of charaka, cottage basin, multi-end basin, and automatic reelers results are presented in Tables 3.3 & Fig 3.3. Charaka unit had eight factors considered, fluctuation in silk prices with a total score of 456. As a result these constraints got indicated first rank, followed by transportation Problems, non-availability of market information, delay in cash, import silk, non availability of market information, no demands in market and inadequate market facilities. Cottage unit had eight factors considered, fluctuation in silk prices with a total score of 736. So this problem got assigned first rank, followed by transportation Problems, non-availability of market information, delay in cash, import silk, inadequate market facilities, inadequate storage facilities and no demand in market. Multiend unit had eight factors considered, fluctuation in silk prices with a total score of 1488. So this difficulty got assigned first rank, followed by transportation Problems, non-availability of market information, delay in cash, import silk, inadequate market facilities, inadequate storage facilities and no demand in market. Automatic unit had eight factors considered, fluctuation in silk prices with a total score of 148. So this trouble got assigned first rank,

followed by transportation Problems, non-availability of market information, inadequate market facilities, import silk, delay in cash, inadequate storage facilities and no demand in market.

DISCUSSION

The majority of sample expressed that, fluctuation in cocoon prices, labour shortage and lack of technical guidance in silk industry. As the study area is placing chronic problem of drinking water itself, water for reeling is becoming one of the emerging problem and lack of quality cocoons regularly is another problem faced at the market level. The other problems encountered by reelers are fluctuation in raw silk price, long distance in market[5&6]. The silk reelers, majority of respondents expressed that, fluctuation in cocoon prices and absence of quality cocoons as the major problems. With respect to processing problems, reelers expressed that the major problem was with respect to non availability of good quality cocoons, followed by shortage of labour. With respect to marketing problems in reelers, the respondents expressed price fluctuations in cocoon as well as raw silk price as the major problem followed by lack of market information[7]. The lack of grading facilities and high fluctuation in prices of silk cocoons were also articulated as major constraints in obtaining good returns[8]. The study area major constraints in silk industry suffered from lack of skilled labour, infrastructure, financial support and correct information about the programmes[9]. The finding similar in the present study was estimated.

CONCLUSION

Sericulture is an agro- based cottage industry like mulberry cultivation, silkworm rearing, cocoon production, silk reeling (charka, cottage, multiend and automatic reeling), twisting and weaving (silk fabric). The study area major problems identified like fluctuation in cocoon and raw silk price and poor quality of cocoon. With labour is one more essential factor which includes crucial elements like

Shortage of skilled labour particularly women labour and also prohibition of child labour. Further extension efforts, the government must come give confidence to help the cottage, charka and filature units to change over to better technologies like automatic and multi-end technology by given that financial support to acquire requisite training and establish improved units. The other important problem is government policies as reelers not aware of imports of silk from china, changes in import tariffs and lack of remunerative price for domestic silk.

REFERENCES

1. Manjunath, M., Narayanaswamy, K. C., Savithramma, Scenario of mulberry and cocoon production in major silk producing states of India. *Indian Journal of Economics and Development,* **3(8):** pp.1-8 (2015).
2. Jayaprakasha Narayana, A. G., Shankar, R., Bhandiwad and Halliyal, V. G., Indian sericulture and silk industry: An overview, *The Textile Journal*, **8(3):** p. 58 (1994).
3. Vijaykumar, P., Kathari, B. G., Patil and Das, S., An energy efficient re-reeling process for silk reeling industry to reduce deforestation, *Indian Journal of Fibre & Textile Research*, **36:** pp 96-98 (2011).
4. Lakshmanan, S., Mallikarjuna, B., Ganapathi Rao, R. and Geetha Devi, R. G., Studies on adoption of sericultural innovations at farmers' level in Tamil Nadu: an empirical analysis. *Indian Journal of Sericulture*, **37(1):** 44-17 (1998a).
5. Hanumappa, H. G., Sericulture Society and Economy, Himalaya publishing House, Bombay (First Edition): pp. 87-124 (1993).
6. Mahesh, G., Business ananlys is of silk reeling units in Chintamani taluk of Chikkabalapura district, Karnataka. M. Sc. (Agri.) Thesis, University Agricultural Science, Bangalore, Karnataka (India) (2012).
7. Somunya, A. N., Dynamics of cocoon prices and business performance of silk

reeling units in Karnataka. M. Sc. (Agri.) Thesis, University Agricultural Science, Bangalore, Karnataka (India) (2014).

8. Chandrashekar, R., Income and employment generation in sericulture vis-a-vis alternative crops in Hosur taluk of Dhrmapuri district. *M.Sc. (Agri.) thesis,* University Agricultural Science, Bangalore, Karnataka (India) (1985).

9. Kerutagi, M. G., An economic analysis of silk reeling units in Karnataka. *Ph.D Thesis*, University Agricultural Science, Bangalore, Karnataka (India) (1999).