



## Value Addition in Sericulture through Cocoon Crafting

(\*Jasmeena Qadir<sup>1</sup> and Tajamul Islam<sup>2</sup>)

<sup>1</sup>Division of Sericulture, Sher-e-Kashmir University of Agricultural Sciences and Technology of Jammu, Jammu (180009), India

<sup>2</sup>College of Temperate Sericulture, Mirgund, SKUAST-Kashmir, India-190025

\*Corresponding Author's email: [jasmeena.qadir786@gmail.com](mailto:jasmeena.qadir786@gmail.com)

Sericulture is an agro-based industry, which suits rural-based farmers, farm women, entrepreneurs and artisans. It involves lots of on-farm and off-farm activities to produce the final finished product, silk and silk goods. In each of the activities, a number of by-products, popularly called wastes are generated. Waste is wealth in sericulture and labeling the natural resource for proper recycling and utilization is the need of hour. The defective cocoons or cut cocoons which are rejected as waste in grainages and reeling sector can be utilized in making crafts. Cocoon crafting is an art of designing of some handicraft products like flowers, bouquets, garlands, greeting cards and other artistically designed fancy items. The fancy by-products made from these waste cocoons are in demand nowadays and considerably fetch a bigger price. It bears low investment and no specific technicality and provides greater returns. It can be taken as a sideline activity and crafts can be made in leisure time. The development/designing of cocoon handicrafts will attract attention of huge number of local masses, thereby boosting up their revenue returns and value addition in sericulture through handicraft market.

**Keywords:** Art, Crafts, Sericulture, Value Addition, Waste Cocoons.

### Introduction

Sericulture is an agro based and labour intensive cottage industry involves different on-farm and off-farm activities for the production of Silk. It has been fully recognized as an important rural industry in India generating high employment and income per unit area of land. One hectare of mulberry land can generate employment to 13 people per year (Sarkar *et al.*, 2017). The main activities in sericulture are cultivation of mulberry, silkworm rearing and post cocoon technology for production of silk products. During the process of silk reeling many by-products are generated which are disposed as waste and pollute the environment. Majority of the farmers belongs to economically weaker sections and unaware the full potential of by-products (Buhroo *et al.*, 2018). The silk cocoons are mainly used for silk production and remaining left over pupae is rarely utilized for animal feed, oil extraction, fertilizer (Barcelos *et al.*, 2021). The cut cocoons and defective cocoons generated from grainage industry and cocoon market can be used for making crafts (Kallimani *et al.*, 2016; Qadir *et al.*, 2023). Cocoon crafting refers to art and skill of producing decorative or artistic items by employing silk cocoons as a raw material. It involves designing of handicraft products like flowers, bouquets, garlands, greeting cards and other artistically designed fancy items (Chakravorty *et al.*, 2010; Kaul and Pandey 2014). Handicrafts are handmade products prepared from raw indigenous material using traditional artistic tools or even some simple machinery in its designing/innovation (West *et al.*, 2017). The raw material for cocoon crafting is generally

silk cocoons. The silk cocoons are harvested after raising silkworms over mulberry leaf in sericulture. The silk cocoons are reeled to obtain raw silk and converted into silk fabrics and silk goods which are exploited commercially over a large scale. During the reeling of silk cocoon, different defective cocoons do not adhere to the quality silk production and lot of cut cocoons are generated in seed production centers (Qadir *et al.*, 2022). Therefore the defective cocoons or cut cocoons which are rejected as waste can be utilized in making crafts. The craft artist bears the distinctive ‘hand of the maker’ and where the craftsperson maintains direct control over hand, tool and machine operations used in the production process. The cocoon crafting does not involve any highly skilled but medium-specific technical skills can significantly transform raw materials into finished products (Kallimani *et al.*, 2016). The conversion of waste cocoons into beautiful products employs very affordable materials as mentioned in figure 1. Cocoon crafted flowers can be used as ornamentals and for decoration purpose to enhance aesthetic value (Kaul and Pandey 2014). The eye catching art of cocoon craft is one of the very interesting utility of by-products which will give scope to develop human skills in addition to generate self employment and revenue (Kallimani *et al.*, 2016). The art of making crafts from silk cocoons is less technical requires low investment and can generate hefty amount to artist who takes it as a subsidiary work at home (Kaul and Pandey 2014). This review throws light on the perspectives of cocoon crafting for value addition to sericulture.

### Importance of cocoon crafting for value addition in sericulture

Cocoon crafting requires low investment and defective or cut cocoons can be purchased on a very low price (Qadir *et al.*, 2022). It does not require any specific skill to craft different decorative products viz., flowers, bouquets, garlands. Other materials required for cocoon crafting are very affordable and easy available. It is eco-friendly and cost-effective enterprise for rural women. It requires less time and women can do it in leisure time. It does not require any large space; women can pick this enterprise at home. It brings more economy. The cocoon crafted products lasts for many years and are in demand nowadays. The eco-friendly products are welcomed by consumers worldwide. It utilizes waste cocoons and generates economy from waste.

### Possibility of developing crafts from pierced cocoons

1. Different kinds of single flowers viz., Rose, Chrysanthemum, Aster, Jasmine etc.
2. Different kinds of garlands – single row, cocoon cap, big VIP garlands etc.
3. Variety of bouquets (Bamboo, Sheet, Thermo coal)
4. Greeting cards
5. Wall hangings
6. Flower pots / Flower vases
7. Door decorations (Curtains, hangings)
8. Photo frames
9. Marriage stage / Birthday / New year decoration materials
10. Key chains etc.

**Table 1: Economics of cocoon crafting enterprise (Kallimani *et al.*, 2016).**

Economic of cocoon crafts	No. of cocoons required	Cost (Rs.)	Other cost (Rs.)	Total cost (Rs.)	Profit	B:C ratio
Single flower	1-5	0.36-1.80	1.22	1.58-3.02	1.98-6.0	1:1.66 to 1:4.12
Flower bouquet	150	54	24.9	78.90	21.10	1:1.27
Garland	34-484	12-174	9-171	22-345	20-155	1:1.25 to 1:5.54
Flower vases	20	100	26-51	126-151	24-59	1:1.19 to 1:1.42

Greeting card	5-10	1.80-3.6	5.86-26.82	7.66-29.2	7.34-20.38	1:1.69 to 1:1.96
Hangings	312	113	41.2	153.32	96.68	1:1.63
Wall frames	10	3.6	382	385.62	114.40	1:1.30



Figure: Cocoon crafts in preparation of different fancy items (Priyadharshani *et al.*, 2022).

## Conclusion

The waste cocoons have generally less commercial value and possess a greater potential to be utilized skillfully to craft value added products for decoration and aesthetic purpose. Crafting of different products from silk cocoons *viz.*, flowers, bouquets, garlands, greeting cards, wall hangings and other artistically designed fancy items can generate a lot of amount to artisans. It is a self-employment which requires less investment can be carried out in leisure. If development/designing of cocoon handicrafts is taken as a commercial activity, it will attract attention of huge number of local masses, thereby boosting up their additional revenue returns and value addition in sericulture through handicraft market.

## References

1. Buhroo, Z. I., Bhat, M. A., Malik, M. A., Kamili, A. S., Ganai, N. A., & Khan, I. L. (2018). Trends in development and utilization of sericulture resources for diversification and value addition. *International Journal of Entomological Research*, 6(1), 27-47.
2. Chakravorty, R., Dutta, P., & Ghose, J. (2010). Sericulture and traditional craft of silk weaving in Assam. *Indian Journal of Traditional Knowledge*, 9(2): 378-385.
3. Kallimani, C. S., Chandrashekar, P., Naika, R., & Bharathi, V. P. (2016). Integrating Sericulture Byproducts for Sustainability. *Indian Horticulture Journal*, 6:67-70
4. Kaul, S., & Pandey, R. K. (2014). Art of Silk Cocoon Crafting-A Boon for Value Addition. *Asian Journal of Pharmaceutical Science and Technology*, 4(4), 168-172.
5. Priyadharshini, P., Swathiga, G., Thangamalar, A., & Deepa, K. (2022). Cocoon Crafts. *Just Agriculture*, 2(11):1-6.
6. Qadir, J., Gupta, R. K., Bali, K., Sharma, M., & Gupta, S. K. (2022). Impact of Sericin fortified mulberry leaves on the cocoon traits of silkworm *Bombyx mori* L. *The Pharma Innovation Journal*, 11(10): 1519-1522
7. Qadir, J., Islam, T., Sudan, N., & Aryan, S. (2023). Grass Root innovations for Better Performance of Sericulture Industry. *Biological Forum – An International Journal* 15(4): 996-999(2023)
8. Sarkar, K., Majumdar, M., & Ghosh, A. (2017). Critical analysis on role of women in sericulture industry. *International Journal of Social Sciences*, 6(3), 211-222.
9. West, A., Istook, C., Porterfield, A., & Ghosh, T. (2017). A Service Learning Collaborative to Build a Sustainable Enterprise for Underprivileged Women (SEuW). *Journal of Textile Design Research and Practice*, 5(1), 3-16.