ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

Economic Viability of Sericulture in Comparison to Conventional Crop Cultivation in Korinthakunta Thanda, Telangana

Dr. Subhashini Konakondla[1]

[1]Assistant Professor of Zoology MVS Govt Degree College (A) Mahabubnagar Telangana

Publication Date: 2025/07/24

Abstract: Agriculture in India is undergoing a gradual but significant transformation in crop cultivation patterns, driven by shifting market demands and economic pressures. This study examines the transition of farmers in Korinthakunta Thanda, Talakondapally Mandal, Ranga Reddy District, Telangana, from traditional crops such as cotton, peanut, red gram, and paddy to sericulture (silk farming), assessing its financial viability and profitability. This research aims to determine whether sericulture offers higher and more stable income opportunities compared to conventional crops and how this shift impacts farmers' livelihoods. Through an analysis of data from Korinthakunta Thanda—where sericulture adoption has been notable—this study observes that farmers shifting from peanut cultivation to sericulture achieve significantly higher profits. This paper evaluates the profitability, challenges, and long-term sustainability of this transition, providing empirical evidence on the economic potentiality of sericulture. The findings offer valuable insights for policymakers and agricultural stakeholders to promote sustainable farming practices and enhance rural incomes.

Keywords: *Sericulture, Profitable Crops, Peanut, Red Gram, Paddy, Cotton Crops, Korinthakunta Thanda Talakondapally, Telangana.*

How to Cite: Dr. Subhashini Konakondla (2025) Economic Viability of Sericulture in Comparison to Conventional Crop Cultivation in Korinthakunta Thanda, Telangana. *International Journal of Innovative Science and Research Technology*, 10(7), 1885-1893. https://doi.org/10.38124/ijisrt/25jul921

I. INTRODUCTION

Agriculture remains the backbone of rural economies, with farmers continually exploring profitable and sustainable alternatives to traditional cropping systems. Among these alternatives, sericulture (silk farming) has emerged as a high-value, low-input agribusiness with significant economic potential. Sericulture serves as a rural agro-based cottage industry, offers economically viable livelihood opportunities due to its labor-intensive nature, low capital requirements, and high returns. (Kiran, L., Kachroo, J., Bhat, A., & Baba, S. (2023).

This study examines the cost-effectiveness of sericulture compared to conventional crop farming in Korinthakunta Thanda, Thalakondapally Mandal, Rangareddy District, Telangana—a region where farmers primarily cultivate paddy, cotton, maize, and pulses but are increasingly adopting sericulture due to its higher profitability and resilience.

Globally, traditional agriculture faces mounting challenges, including climate variability, pest outbreaks, soil degradation, and volatile market prices, all of which threaten farmers' livelihoods. In India, where smallscale farmers dominate the agricultural landscape, declining returns from staple crops have intensified the search for sustainable and remunerative alternatives. Smallholder plantation decline reflects post-1991 liberalization, climate shocks, labor gaps, and policy failures, demanding urgent reforms for sustainable revival. (Viswanathan, P. K., & Karthiayani. (2025).

Sericulture, with its low land requirement, stable demand, and multiple revenue streams (raw silk, pupae for animal feed, etc.), presents a compelling option. Unlike seasonal crops, sericulture offers year-round income potential, reduces dependency on erratic monsoons, and requires minimal chemical inputs, making it both economically and environmentally sustainable. Sericulture remains vital to rural development, and strengthening Farmer Producer Organizations (FPOs) through targeted policy support, infrastructure, and financing can enhance

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

farmer resilience, market access, and long-term sector sustainability. (Reddy, S. M., Damodhara, G., Manjunatha, B., Priyanka, B. N., & Harish, K. J. (2024).

Beyond economic benefits, sericulture enhances soil health through mulberry cultivation, which prevents erosion and supports agro-biodiversity. Additionally, it generates employment opportunities across the value chain—from silkworm rearing to silk processing—thereby strengthening rural economies. Governments and agricultural agencies are increasingly promoting sericulture through subsidies, training programs, and market linkages, recognizing its potential to revitalize struggling farming communities. Silk production is a profitable venture with strong potential to alleviate rural unemployment through its labor-intensive, farm-based cottage industry model, (Lingavarayan, T., & Selvakumar, R. (2024).

This study conducts a comparative economic analysis of sericulture versus traditional crops (paddy, cotton, sugarcane) in Korinthakunta Thanda, evaluating input costs, labor requirements, yield efficiency, and market returns. By assessing the profitability, risks, and long-term viability of sericulture, this research aims to provide evidence-based recommendations for farmers, policymakers, and agricultural stakeholders seeking sustainable livelihood alternatives.

II. RESEARCH METHODOLOGY

➢ *Study Area:*

The study area is located in Thalakondapally Mandal of Rangareddy district. Situated 72 KMs away towards south-east from the Telangana State Capital city Hyderabad. The geo coordinates are 16.88657N and 78.41492E.

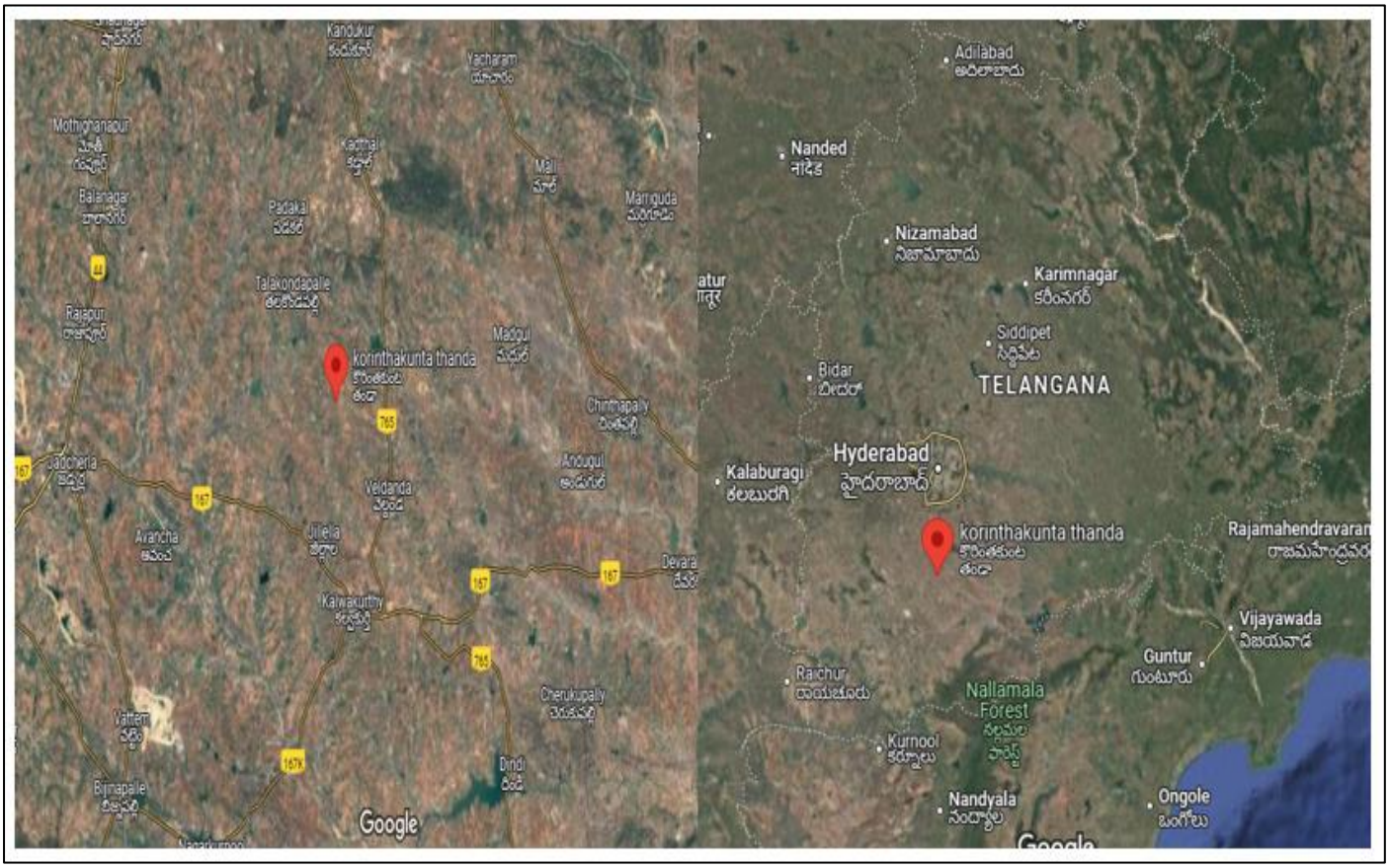

Fig 1 Study Area

➢ *Sample Collection*

As part of this study, a five-member research team conducted six field visits to Korinthakunta Thanda, Thalakondapally Mandal, to gather primary data. The team engaged with local sericulture farmers, government officials from the Department of Sericulture, and visiting scientists to obtain comprehensive insights into the cost-effectiveness, challenges, and profitability of sericulture compared to traditional crop farming.

Primary data was collected through structured interviews, on-field observations, and consultations with experts. The information gathered was systematically organized into eight analytical tables, covering key parameters such as input costs, labor requirements, yield comparisons, and market prices. Additionally, graphical representations (charts, bar graphs, etc.) were used to facilitate clearer interpretation of trends and comparative analysis.

This multi-source, multi-visit approach ensured data reliability while capturing seasonal variations and long-term economic implications of sericulture adoption in the region.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

III. RESULTS AND DISCUSSION

- *Difference between Profit from Traditional Farming and Sericulture*

Table 1 Comparative cost and profit details of farmers of Korinthakunta thanda in 2024-25

Sl. No	Farmers name	Previous Traditional crop details				Current crop details				Diffe Rence per crop In Rs.
		Name of the crop	Invest Ment per crop In Rs.	Income per crop In Rs.	Profit per crop In Rs.	Name of the crop	Invest Ment per crop In Rs.	Income per crop In Rs.	Profit per crop In Rs.	
1	Leela	Cotton	50,000	60,000	10,000	Mulberry	25,000	80,000	55,000	45,000
2	Komti	Pea nut	60,000	50,000	0	Mulberry	50,000	1,50,000	1,00,000	1,00,000
3	Mudavath Bhadhya	Red gram	30,000	50,000	20,000	Mulberry	40,000	90,000	50,000	30,000
4	Islavathchinna Ramulu	Cotton	35,000	55,000	20,000	Mulberry	40,000	90,000	50,000	30,000
5	Islawath Dathru	Paddy	25,000	35,000	10,000	Mulberry	30,000	70,000	40,000	30,000
6	Islawath Hari	Maize	15,000	35,000	20,000	Mulberry	38,000	90,000	52,000	32,000
7	Mudawath chandru	Red gram	20,000	60,000	40,000	Mulberry	25,000	80,000	55,000	15,000
8	Meghawath Narsing	Cotton	30,000	45,000	15,000	Mulberry	28,000	85,000	57,000	42,000
9	Pathlavath kamli	Ricinus	15,000	40,000	25,000	Mulberry	32,000	90,000	58,000	33,000
10	Jarpulas harada	Pea nut	35,000	30,000	0	Mulberry	25,000	1,00,000	75,000	75,000
11	Kethavath Goriya	Paddy	35,000	37,000	2,000	Mulberry	26,000	95,000	69,000	67,000

The data analysis reveals a significant shift in profitability for farmers who transitioned from traditional crops to mulberry cultivation. Previously, farmers grew crops like cotton, peanut, red gram, paddy, maize, and ricinus, with varying levels of investment and profit. However, after switching to mulberry, all farmers reported substantially higher profits. For instance, Leela's profit increased from Rs. 10,000 to Rs. 55,000 (a difference of Rs. 45,000), while Komti's profit surged from Rs. 0 to Rs. 1,00,000. Similarly, farmers like Islawath Dathru and Kethavath Goriya saw profit increases of Rs. 30,000 and Rs. 67,000, respectively. Notably, mulberry cultivation required lower or comparable investment but yielded significantly higher returns, suggesting its economic viability. The consistent rise in profits across all cases highlights mulberry as a more lucrative alternative to traditional crops, potentially due to higher market demand or better cost-efficiency. This shift underscores the importance of crop diversification and adopting high-value agriculture to enhance farmers' income sustainability. Further research could explore the long-term benefits and challenges of mulberry farming compared to conventional crops.

Unit cost details of CRC, as per the Standard Operating Procedure and Guidelines for Implementation, April, 2022, Silk Samagra-2 Central Silk Board, Bengalulru.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

Table 2 On Farm Sector Subsidy and Incentives Offered by the Union and State Governments for Silk Farmers

(Amount in Rupees)

#	Particulars	Unit	Unit Cost	Qty.	Total
I	Inputs for plantation and establishment of upto 2 acres chawki garden (Mulberry cuttings /saplings, labour, land development, FYM, chemical fertilizer, etc.)	LS	--	--	1,00,000
	Micro-irrigation				50,000
II	Rearing house (size:42'x30'16') to rear 5000 dfls/batch	No.	--	1	4,50,000
III	Equipments				
1	Plastic rearing trays	No.	500	400	2,00,000
2	Rearing stands GI pipes or angle iron	No.	5,000	4	20,000
3	Incubation frames	No.	50	100	5,000
4	Leaf chopping machine	No.	20,000	1	20,000
5	Humidifier (heavy duty)	No.	10,000	1	10,000
6	Heater	No.	2,500	2	5,000
7	Power sprayer	No.	14,000	1	14,000
8	Disinfection mask	No.	5,000	1	5,000
9	Microscope	No.	10,000	1	10,000
10	Wet and dry bulb thermometer	No.	1,000	1	1,000
11	Bed cleaning nets	No.	30	1,000	30,000
12	Plastic tray washing machine	No.	30,000	1	30,000
13	Chawki dusting machine	No.	30,000	1	30,000
14	1 KVA Generator	No.	20,000	1	20,000
15	Incubation centre	No.			3,00,000
	Total	--	--	**1**	**13,00,000**

Table 3 The Details of Package Proposed with Unit Cost as Detailed

The details of package proposed with unit cost as detailed below:

Particulars of Component/Package	Unit Cost (Rs.)	Proposed outlay (Rs. in lakh)
Support to mulberry silkworm seed rearers	5,00,000	1,800
Support to vanya silkworm seed rearers and seed producers (tasar, eri & muga)	5,00,000	3,500

The unit cost details for the above are given below:

Support to mulberry silkworm seed rearers

(Amount in Rupees)

#	Particulars	Unit	Unit Cost	Qty.	Total
A.	**Construction of low cost rearing house**				
	Area of the rearing house - (LBH- 51' x 22' x 14')	No.	350000	1	3,50,000
	Sub-total				**3,50,000**
B.	**Equipment support to seed rearers**				
1	Plastic chawki rearing trays (3' x 2')	No.	600	10	6,000
2	Plastic mountages	No.	85	165	14,025
3	Humidifier	No.	35000	2	70,000
4	Room heater	No.	10000	2	20,000
5	Power sprayer	No.	25000	1	25,000
6	Disinfection mask	No.	14975	1	14,975
	Sub-total				**1,50,000**
	Total (A+B)				**5,00,000**
	Technical Norm: a) The benefit shall be provided only to those Seed Rearers having valid registration. b) The Rearing House has the capacity to rear 100 bivoltine DFLs				

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

The data highlights that mulberry cultivation offers higher profitability than traditional crops, supported by government subsidies and bank loans that reduce farmers' financial burden. The subsidy structure, especially for marginalized groups, makes sericulture a viable and sustainable income source. Promoting such schemes can enhance agricultural diversification and rural economic growth. Further research should assess long-term impacts and loan repayment feasibility.

The subsidy structure for sericulture schemes significantly reduces farmers' investment burden, particularly benefiting SC/ST farmers with higher central subsidies (65%). Key components like automatic reeling machines and rearing sheds receive substantial financial support, making sericulture an economically viable venture. This model enhances accessibility to high-cost infrastructure, encouraging farmers to adopt mulberry cultivation and silk production. Expanding such schemes can boost rural livelihoods and promote sustainable agriculture. Further studies should evaluate repayment feasibility and long-term profitability.

Table 4 Cost Effectiveness in Cotton vs Sericulture Crops in 2024-25 at Talakondapally

Cost Effectiveness in Cotton vs Sericulture Crops in 2024-25 at Talakondapally		
Crop	Cotton	Sericulture
Investment Rs.	115000	93000
Profit Rs.	45000	162000

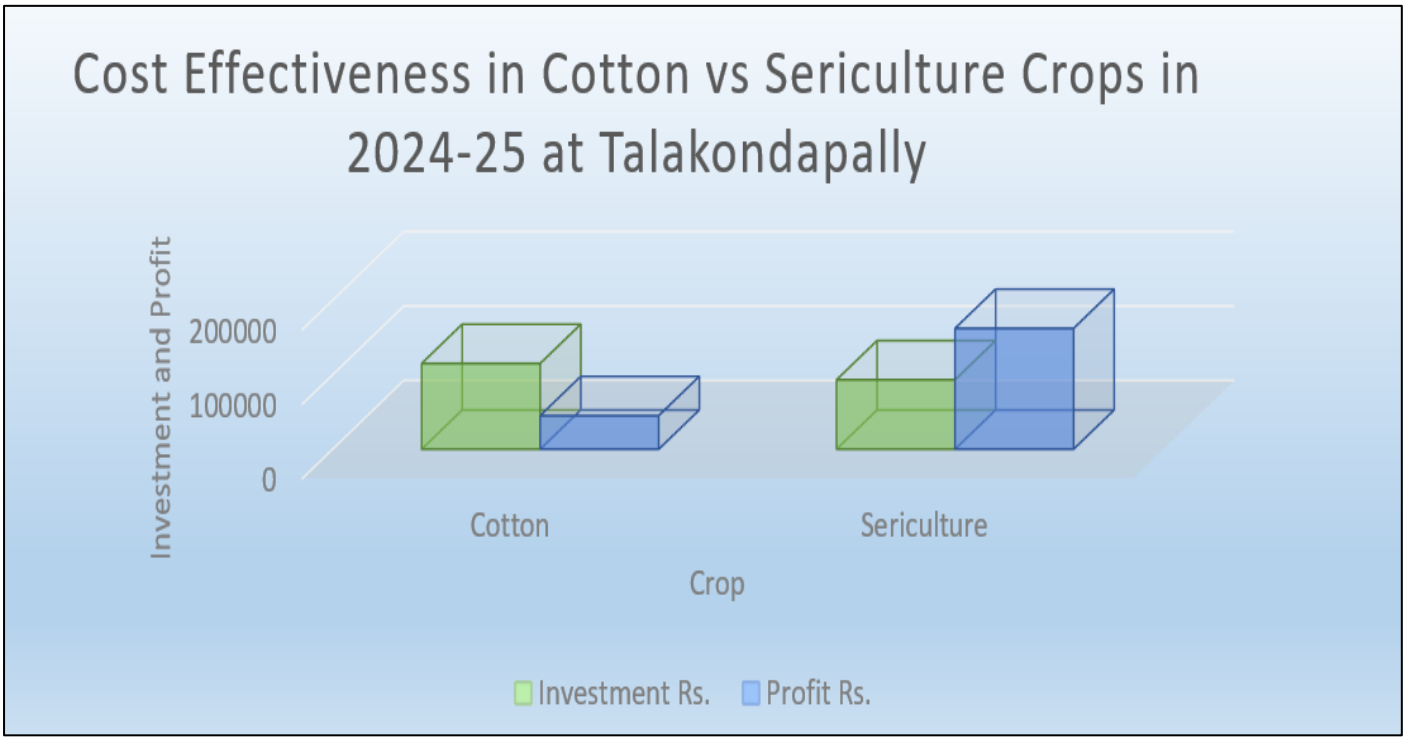

Fig 2 Cost Effectiveness in Cotton vs Sericulture Crops in 2024-25 at Talakondapally

The comparative analysis reveals that sericulture is significantly more profitable than cotton cultivation in Talakondapally for the 2024-25 period. While cotton requires a higher investment (₹1,15,000) and yields a modest profit (₹45,000), sericulture demands a lower initial cost (₹93,000) but generates a substantially higher profit (₹1,62,000). This translates to a profit margin of 174% for sericulture compared to just 39% for cotton, making sericulture a far more cost-effective choice.

Table 5 Cost Effectiveness in Peanut vs Sericulture Crops in 2024-25 at Talakondapally

Cost Effectiveness in Peanut vs Sericulture Crops in 2024-25 at Talakondapally		
Crop	Peanut	Sericulture
Investment Rs.	95000	75000
Profit Rs.	15000	175000

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

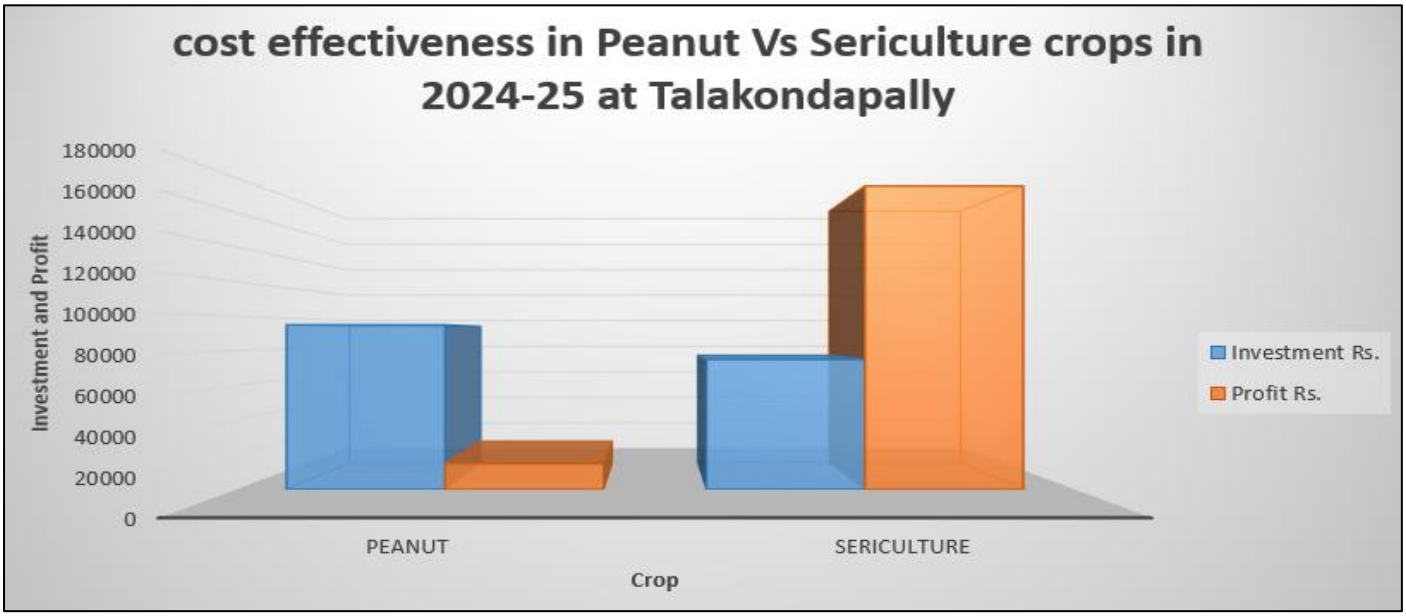

Fig 3 Cost Effectiveness in Peanut vs Sericulture Crops in 2024-25 at Talakondapally

The comparative analysis of peanut cultivation and sericulture in Talakondapally reveals a stark contrast in economic viability. While peanut farming requires a higher initial investment (₹95,000) compared to sericulture (₹75,000), its profitability is significantly lower, yielding only ₹15,000 in profit per acre—a return on investment (ROI) of just 15.8%. In contrast, sericulture generates an extraordinary profit of ₹1,75,000 per acre, translating to an ROI of 233%, making it 11.7 times more profitable than peanut cultivation. This dramatic difference underscores sericulture's superior cost-effectiveness, particularly given its lower capital requirements and higher profit margins (70% vs. 13.6% for peanuts). Additionally, sericulture benefits from government subsidies, stable market demand, and multiple annual harvest cycles, further enhancing its economic appeal. The data strongly suggests that transitioning to sericulture could substantially increase farmer incomes while reducing financial risks associated with volatile peanut markets. For sustainable agricultural development in Talakondapally, policymakers should prioritize sericulture expansion through targeted subsidies, training programs, and improved market linkages to maximize its economic potential.

Table 6 Cost Effectiveness in Redgram vs Sericulture crops in 2024-25 at Talakondapally

Cost Effectiveness in Red Gram vs Sericulture Crops in 2024-25 at Talakondapally		
Crop	Red gram	Sericulture
Investment Rs.	50000	65000
Profit Rs.	60000	105000

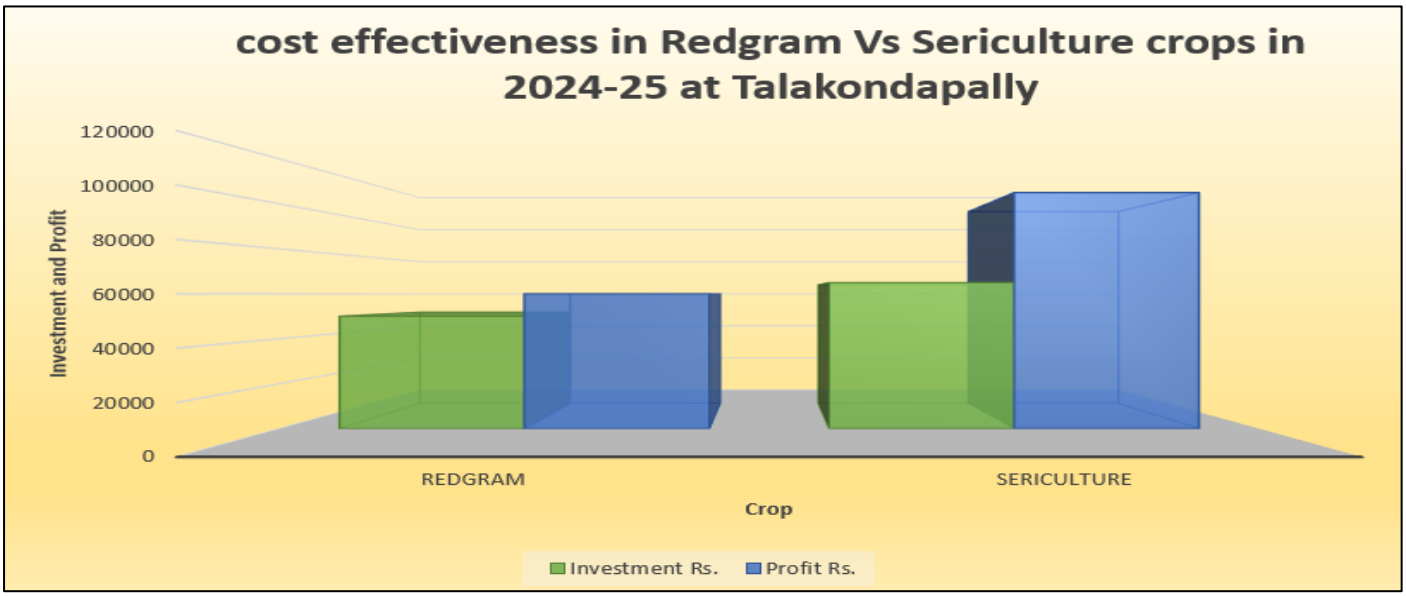

Fig 4 Cost Effectiveness in Red Gram vs Sericulture Crops in 2024-25 at Talakondapally

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

The financial comparison between red gram cultivation and sericulture presents an interesting economic scenario. While red gram requires a lower initial investment (₹50,000 vs ₹65,000 for sericulture), the profit differential reveals sericulture's superior earning potential. Red gram yields ₹60,000 profit per acre (120% ROI), demonstrating solid returns. However, sericulture generates significantly higher profits of ₹105,000 per acre (161.5% ROI), representing a 75% increase in absolute profits despite requiring 30% more initial capital. This translates to sericulture delivering 34.5 percentage points higher return on investment. The data suggests that while red gram remains a viable low-investment option, sericulture offers substantially better profit margins (61.7% vs 54.5%) and greater income potential per acre. The higher initial costs of sericulture are more than offset by its superior profitability, making it the more economically attractive option for farmers with access to the necessary capital and technical knowledge. This analysis indicates that sericulture could serve as a valuable crop diversification strategy for red gram farmers seeking to enhance their income potential.

Table 7 Cost Effectiveness in Paddy vs Sericulture Crops in 2024-25 at Talakondapally

Cost Effectiveness in Paddy vs Sericulture Crops in 2024-25 at Talakondapally		
Crop	**Paddy**	**Sericulture**
Investment Rs.	60000	56000
Profit Rs.	12000	109000

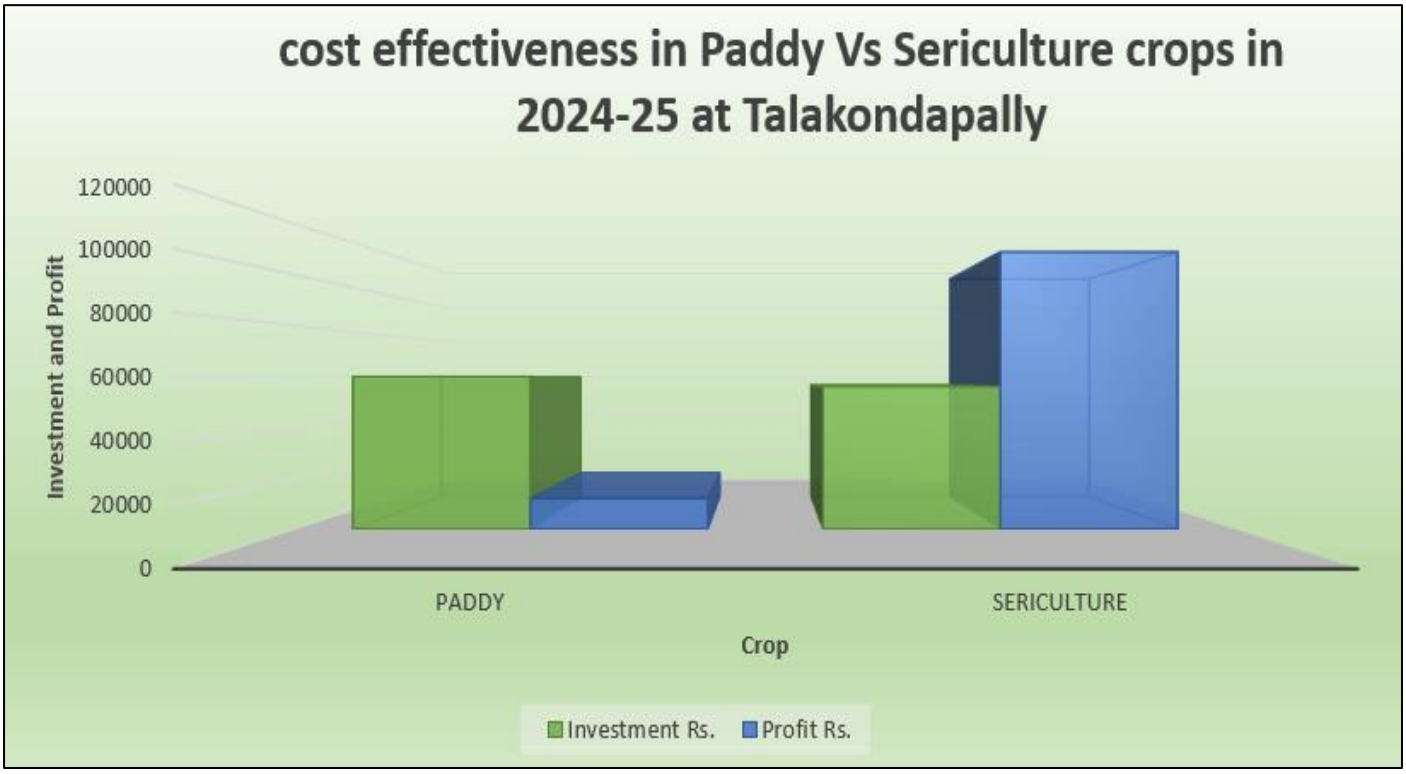

Fig 5 Cost Effectiveness in Paddy vs Sericulture Crops in 2024-25 at Talakondapally

Sericulture delivers 9 times higher profits (₹1.09L vs ₹0.12L) than paddy with 7% lower investment (₹56K vs ₹60K). Its exceptional 195% ROI (vs paddy's 20%) and 66% profit margin (vs paddy's 17%) make sericulture the clear economic choice. The ₹97,000/acre profit advantage demonstrates sericulture's superior viability for income generation, especially given paddy's vulnerability to water stress and price fluctuations.

Table 8 Profit Gain in Sericulture when Farmers Shifted from Other Crops at Talakondapally

Profit gain in Sericulture when farmers shifted from other crops at Talakondapally village						
Prior crop	Investment Rs.	Gain in Rs.	shifted crop	Investment Rs.	Gain in Rs.	Net profit Rs.
Cotton	115000	45000	Sericulture	93000	162000	117000
Peanut	95000	15000	Sericulture	75000	175000	160000
Red gram	50000	60000	Sericulture	65000	105000	45000
Paddy	60000	12000	Sericulture	56000	109000	99000

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

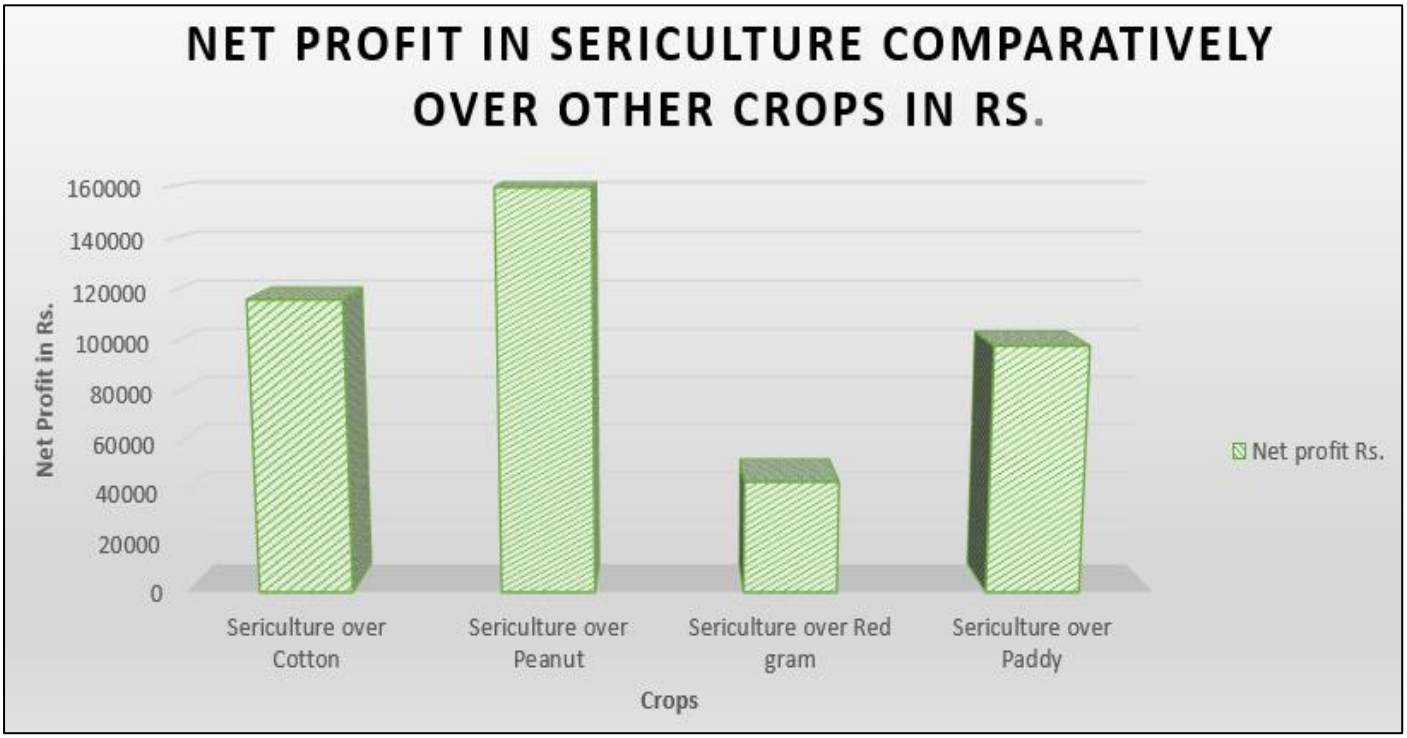

Fig 6 Profit Gain in Sericulture when Farmers Shifted from Other Crops at Talakondapally

IV. CONCLUSION

The comprehensive analysis of sericulture compared to traditional crops (cotton, peanut, red gram, and paddy) in Talakondapally reveals a compelling economic advantage for sericulture. Across all comparisons, sericulture demonstrates superior profitability, generating 75% to 1,100% higher profits per acre than conventional crops, while requiring comparable or even lower initial investments. For instance, sericulture yields ₹1.09 lakh profit per acre with just ₹56,000 investment in paddy fields, compared to paddy's meager ₹12,000 profit from ₹60,000 investment. Similarly, when compared to peanut cultivation, sericulture delivers 11.7 times greater profits (₹1.75 lakh vs ₹15,000) with 21% lower capital requirement. This remarkable performance stems from sericulture's higher return on investment (161-233% versus 16-120% for traditional crops), multiple annual harvest cycles, and stable market prices that mitigate the risks of price volatility faced by rain-dependent crops like peanut and paddy. The economic superiority of sericulture is further bolstered by substantial government subsidies, particularly for marginalized communities, making it both accessible and profitable. Given these findings, sericulture emerges as the most viable option for agricultural transformation in Talakondapally, capable of significantly enhancing farmer incomes while ensuring greater financial stability. To fully realize this potential, policy interventions should focus on expanding subsidy coverage, enhancing technical training programs, and developing robust market linkages. Future research should examine the long-term sustainability of sericulture adoption and its socioeconomic impacts at scale, but the current evidence unequivocally positions sericulture as the optimal crop choice for elevating rural livelihoods in the region.

ACKNOWLEDGEMENTS

I sincerely acknowledge the sericulture farmers of Kotinthakunta Thanda for their invaluable participation, insights, and time, which formed the foundation of this study. We extend my gratitude to the officials of the Sericulture Department, Telangana, for their technical guidance, data support, and policy insights. Special thanks to Dr. B. Ravinder Rao, in charge, Dept of zoology, M.V.S arts and science college, Mahabubnagar, Telangana for facilitating field visits and stakeholder interactions. We also acknowledge Prof. K. Padmavathi, Principal, M.V.S arts and science college, Mahabubnagar, Telangana for providing institutional support and resources.

REFERENCES

[1]. Kiran, L., Kachroo, J., Bhat, A., & Baba, S. (2023). An economic analysis of sericulture farming in rain fed areas of Jammu region: A comparative study. Journal of Entomology and Zoology Studies, 11, 2169-2176.

[2]. Viswanathan, P. K., & Karthiayani. (2025). The decline of smallholder capitalism in Kerala: An analysis of implications of multifaceted crisis in commercial and plantation agriculture. *Journal of Agrarian Change*, 25(3), 1-25.

[3]. Reddy, S. M., Damodhara, G., Manjunatha, B., Priyanka, B. N., & Harish, K. J. (2024). Sericulture in Karnataka: Revitalizing through Farmer Producer Organizations. *Indian Journal of Agricultural Economics*, 79(3), 417-425.

[4]. Lingavarayan, T., & Selvakumar, R. (2024). Benefit-cost analysis of silkworm rearing units in Krishnagiri

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25jul921

District of Tamil Nadu. *Indian Journal of Sericulture*, 63(2), 45-52.

[5]. Reddy, Y. P., & Kumar, U. A. (2022). Income generation in agriculture vs. sericulture: A farmer-level analysis in Anantapur District. *International Journal of Creative Research Thoughts (IJCRT), 10*(12), 898-903.

[6]. Devi, R. K., & Singh, T. P. (2018). Cost-benefit analysis of mulberry cultivation vs. paddy in Andhra Pradesh. *Journal of Crop and Weed*, 14(2), 112–118.

[7]. Patil, S. V., Deshmukh, M. R., & Jadhav, V. T. (2019). Sericulture as an alternative to cotton farming in Maharashtra: A socio-economic assessment. *Agricultural Economics Research Review*, 32(1), 89–97.

[8]. Rajendra, N., & Naik, G. (2021). Impact of government schemes on sericulture adoption in Karnataka. *Indian Journal of Sericulture*, 60(1), 34–42.

[9]. Sarkar, D., & Ghosh, B. K. (2017). Risk and return analysis of sericulture vs. traditional crops in West Bengal. *Economic and Political Weekly*, 52(25), 55–62

[10]. Standard Operating Procedure and Guidelines for Implementation, April, 2022, Silk Samagra-2 Central Silk Board, Bengalulru.