International Scientific Journal of Engineering and Management (ISJEM) ISSN: 2583-6129
Volume: 04 Issue: 04 | April – 2025 DOI: 10.55041/ISJEM02729
An International Scholarly || Multidisciplinary || Open Access || Indexing in all major Database & Metadata

"ANALYSING THE EFFECTIVENESS OF SUBSIDIES AND FINANCIAL INCENTIVES ON THE PRODUCTION OF GLORIOSA SUPERBA SEEDS"

Author

Mr. Senthil Kumar V

II.M.Com(CS)

Department of Corporate Secretaryship, PSG College of Arts & Science, Coimbatore-14.
e-mail: senthilkumarveerachamy@gmail.com

Co-Author Ms. Indhumathi G *Assistant Professor*
Department of Corporate Secretaryship, PSG College of Arts & Science, Coimbatore-14.
e-mail: indhumathig@psgcas.ac.in

ABSTRACT

This study explores the economic viability, demographic characteristics, and the role of government subsidies in the cultivation of *Gloriosa superba* (Kanvali seed), a medicinal plant of significant commercial and pharmaceutical value. Primary data collected from 132 farmers indicate that cultivation is predominantly practiced by young adults and graduates, with small to medium-scale farming being most common. Initial production costs typically range from ₹3 to ₹5 lakhs per acre. Despite moderate awareness of schemes like the National AYUSH Mission (NAM), PM-Kisan, and PMFBY, statistical analysis revealed no significant correlation between educational background and awareness, nor between subsidy support and the scale of farming. These findings suggest that current financial aid mechanisms have limited impact on expanding cultivation. The study recommends enhanced awareness programs and more efficient subsidy distribution systems to promote sustainable growth in *Gloriosa superba* farming.

INTRODUCTION

Agriculture remains the backbone of the Indian economy, with a large portion of the rural population depending on it for their livelihood. In recent years, the cultivation of medicinal and aromatic plants has emerged as a promising avenue for income diversification and sustainable agricultural development. Among these, *Gloriosa superba*—commonly known as Flame Lily—holds great commercial importance due to its medicinal value. It contains alkaloids like colchicine and gloriosine, widely used in pharmaceutical formulations to treat ailments such as gout, inflammation, and skin conditions.

The plant is primarily cultivated in parts of Tamil Nadu, Kerala, Andhra Pradesh, and Maharashtra, where climatic and soil conditions are favorable. Tamil Nadu alone cultivates *Gloriosa superba* across nearly 5,000 acres in districts such as Erode, Salem, Dindugal, and Karur. Despite its high market potential, cultivation remains limited due to high input costs, poor seed germination, lack of technical support, and market price volatility.

To address these issues, the Indian government, in collaboration with state agencies, has introduced several financial incentives and subsidy schemes. These include support for irrigation, seed distribution, land preparation, and input costs, implemented through initiatives like the National Medicinal

Plants Board (NMPB). However, on-ground implementation faces several challenges, including limited farmer awareness, complex administrative procedures, and regional disparities in access and outcomes.

This study seeks to assess the impact of government subsidies and financial assistance on the cultivation of *Gloriosa superba*, focusing on both quantitative outcomes—such as yield and profitability—and qualitative factors, including farmer awareness, accessibility of benefits, and perception of policies. The insights gained will help policymakers and agricultural planners enhance the effectiveness of support systems for medicinal plant cultivation in India.

OBJECTIVES

1) To assess the impact of government subsidies and financial incentives on the cultivation and yield of gloriosa superba.
2) To evaluate the economic viability and profitability of gloriosa superba production under different subsidy schemes and financial support mechanism.
3) To identify the challenges faced by farmers in accessing and utilizing subsidies and financial incentives

STATEMENT PROBLEM

Gloriosa superba, a medicinal plant with high pharmacological value, has enormous economic potential for farmers in South India, especially in Tamil Nadu, Karnataka, and Andhra Pradesh. Gloriosa farming provides a promising livelihood opportunity because to the increasing demand for its tubers and seeds in the manufacturing of colchicine. In response, the government has implemented a number of subsidies and financial incentives to boost production. These include input subsidies, soft loans, and help from organizations such as the National Medicinal Plants Board. However, the actual impact of these subsidies on improving the yield and cultivation practices of Gloriosa superba has received insufficient attention, particularly at the grassroots.
Despite the availability of these financial support channels, many farmers do not fully benefit from them or are unable to access them at all. Lack of awareness, procedural delays, bureaucratic difficulties, and little instruction on how to effectively apply for or use these schemes are all common barriers. Furthermore, differences in the execution of subsidy programs among districts and states can result in inconsistent results. As a result, farmers planting Gloriosa superba are unable to exploit the crop's full economic potential, creating a mismatch between policy aim and on-the-ground impact.

The purpose of this study is to critically examine the real-world impact of government subsidies and financial incentives on Gloriosa superba cultivation. It seeks to close the gap between policy intentions and actual outcomes by identifying operational bottlenecks, analysing profitability, and recommending changes to future policy interventions.

RESEARCH METHODOLOGY:

SAMPLE DESIGN

This study used the descriptive method to come at a relevant description of numerous perspectives related to the case. This type of study is designed to demonstrate the association and relationship between variables.

International Scientific Journal of Engineering and Management (ISJEM) ISSN: 2583-6129
Volume: 04 Issue: 04 | April – 2025 DOI: 10.55041/ISJEM02729
An International Scholarly || Multidisciplinary || Open Access || Indexing in all major Database & Metadata

TOOLS OF ANALYSIS

1) Percentage
2) Chi-Square
3) Anova

RESULTS AND FINDINGS:

S.no	**Age**	**Frequency**	**Percentage (%)**
1.	Young Adults (19-30 years)	64	48.5
2.	Adults (31-45 years)	35	26.5
3.	Elderly (46+ years)	33	25.0
	TOTAL	**132**	**100.0**
S.no	**Gender**	**Frequency**	**Percentage (%)**
1	Male	69	52.3
2	Female	63	47.7
	TOTAL	**132**	**100.0**
S.no	**Educational**	**Frequency**	**Percentage (%)**
1	School Level	43	32.6
2	Graduate	57	43.2
3	No Formal Education	32	24.2
	TOTAL	**132**	**100.0**
S.no	**Village**	**Frequency**	**Percentage (%)**
1	Ambilikai	58	43.9

2	Kallimandayam	40	30.3
3	Kappalpatty	34	25.8
	Total	**132**	**100.0**

INTERPRETATION

1. Age-wise Distribution

Young adults (19–30 years) form the largest group at 48.5%, followed by adults (31–45 years) at 26.5%, and elderly (46+ years) at 25.0%. This shows higher participation from the younger population.

2. Gender-wise Distribution

The sample is fairly balanced, with males making up 52.3% and females 47.7%, ensuring representation from both genders.

3. Educational Background

Graduates constitute the highest group at 43.2%, followed by school-level education at 32.6%, and 24.2% with no formal education, indicating a mix of educational backgrounds.

4. Village-wise Distribution

Most respondents are from Ambilikai (43.9%), followed by Kallimandayam (30.3%) and Kappalpatty (25.8%), showing good geographic coverage across the villages.

ANALYSIS:

OBJ.1 To assess the impact of government subsidies and financial incentives on the cultivation and yield of gloriosa superba

This study surveys 132 farmers across three villages to understand their age, gender, education, location, and annual production costs per acre, offering a snapshot of their socio-economic profile.

INITIAL ANNUAL PRODUCTION COSTS

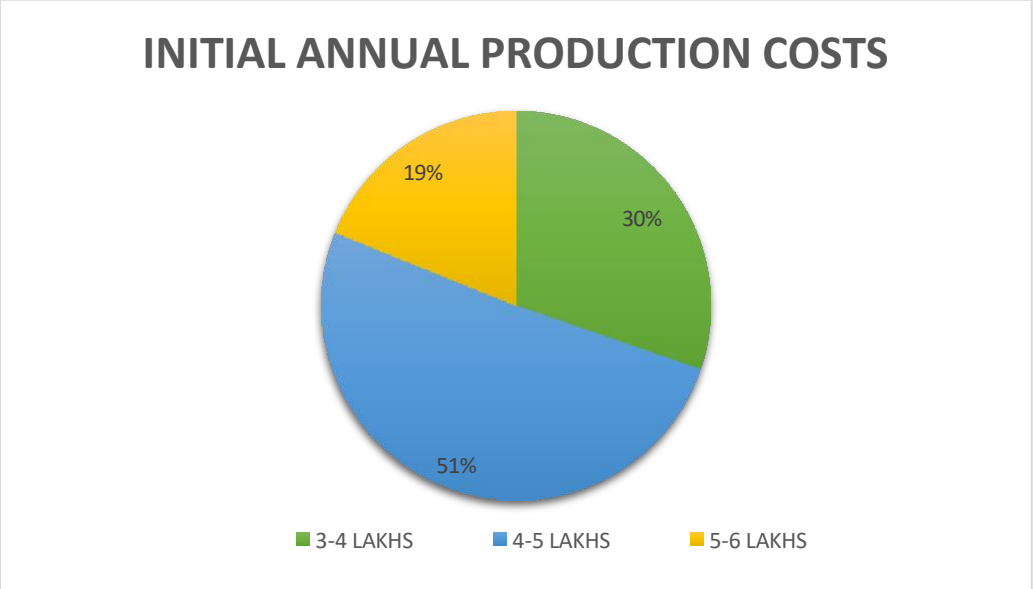
S.no	Initial Annual Production Costs (Rs./Acre)	Frequency	Percentage (%)
1	3-4 Lakhs	40	30.3
2	4-5 Lakhs	67	50.8
3	5-6 Lakhs	25	18.9
	Total	**132**	**100.0**

International Scientific Journal of Engineering and Management (ISJEM) ISSN: 2583-6129
Volume: 04 Issue: 04 | April – 2025 DOI: 10.55041/ISJEM02729
An International Scholarly || Multidisciplinary || Open Access || Indexing in all major Database & Metadata

INTERPRETATION

The table indicates that out of the 132 respondents surveyed, 30% reported an average annual production cost of ₹3–4 lakhs, 51% reported ₹4–5 lakhs, and the remaining 19% reported costs ranging from ₹5–6 lakhs.

The majority of the respondents (51%) reported their average annual production costs during the initial period of cultivation.



FINDINGS

The study revealed that nearly half of the respondents (48.5%) were young adults aged 19–30 years, with a fairly balanced gender distribution of 52.3% males and 47.7% females. In terms of education, 43.2% were graduates, followed by 32.6% with school-level education, and 24.2% having no formal education. Geographically, the highest number of respondents were from Ambilikai (43.9%), with Kallimandayam (30.3%) and Kappalpatty (25.8%) also well represented. Regarding initial annual production costs per acre, the majority (50.8%) reported spending between Rs. 4–5 lakhs, indicating that most farmers operate within a mid-range cost bracket.

OBJ.2 To evaluate the economic viability and profitability of gloriosa superba production under different subsidy schemes and financial support mechanism.

International Scientific Journal of Engineering and Management (ISJEM) ISSN: 2583-6129
Volume: 04 Issue: 04 | April – 2025 DOI: 10.55041/ISJEM02729
An International Scholarly || Multidisciplinary || Open Access || Indexing in all major Database & Metadata

SUBSIDIES AND SCHEMES IMPACTED YOUR CULTIVATION

(I) The scale farming?	(J) The scale farming?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Small Farming (5 Acre)	Medium Farming (5-20 Acre)	-.14297	.13991	.564	-.4747	.1888
	Large Farming (more than 25 Acre)	.07550	.25264	.952	-.5235	.6745
Medium Farming (5-20 Acre)	Small Farming (5 Acre)	.14297	.13991	.564	-.1888	.4747
	Large Farming (more than 25 Acre)	.21848	.25168	.661	-.3783	.8152
Large Farming (more than 25 Acre)	Small Farming (5 Acre)	-.07550	.25264	.952	-.6745	.5235
	Medium Farming (5-20 Acre)	-.21848	.25168	.661	-.8152	.3783

This section evaluates the economic viability and profitability of *Gloriosa superba* cultivation under various subsidy schemes and financial support mechanisms. It aims to understand whether these supports influence the scale of farming among small, medium, and large-scale cultivators.

INTERPRETATION

The findings suggest that **subsidy schemes and financial support mechanisms did not significantly influence the scale of farming** in Gloriosa superba cultivation. Regardless of farm size, farmers shared similar views on the role and effectiveness of subsidies. This implies that while subsidies

may offer general financial relief, they **do not appear to drive expansion or scaling** of cultivation in a statistically meaningful way.

Turkey HSD

The scale farming?	N	Subset for alpha = 0.05
		1
Large Farming (more than 25 Acre)	11	1.6364
Small Farming (5 Acre)	59	1.7119
Medium Farming (5-20 Acre)	62	1.8548
Sig.		.586

Means for groups in homogeneous subsets are displayed.

FINDINGS

The study assessed the economic viability and profitability of Gloriosa superba cultivation under various subsidy schemes across different scales of farming: small (5 acres), medium (5–20 acres), and large (more than 25 acres). Statistical comparisons between these groups showed that the **mean differences in responses were minimal**. The **p-values for all comparisons were above 0.05**, indicating **no statistically significant difference** in how farmers across different farm sizes perceived the impact of subsidies.

OBJ.3 To identify the challenges faced by farmers in accessing and utilizing subsidies and financial incentives

Awareness of government subsidies or financial incentives available for Gloriosa Superba (Kanvali Seed) Farming

This section examines the relationship between farmers' educational qualifications and their awareness of government subsidies or financial incentives available for *Gloriosa superba* (Kanvali Seed) farming. The analysis aims to determine whether educational background influences the level of awareness regarding various schemes such as the National Ayush Mission (NAM), PM-Kisan, and Pradhan Mantri Fasal Bima Yojana (PMFBY).

INTERPRETATION

The statistical test results indicate that **educational qualification does not significantly influence farmers' awareness** of government subsidies or financial incentives for *Gloriosa superba* (Kanvali Seed) farming. With a **Chi-Square p-value of 0.601**, there is no meaningful relationship between the level of education and awareness of schemes like **NAM**, **PM-Kisan**, or **PMFBY**. This suggests that awareness efforts may be reaching farmers across all educational levels similarly, and that **factors other than education**—such as field experience, community networks, or extension services— may play a more prominent role in informing farmers about these schemes.

a. 10 cells (47.6%) have expected count less than 5. The minimum expected count is 1.70

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	10.173[a]	12	.601
Likelihood Ratio	11.945	12	.450
N of Valid Cases	132		

FINDINGS

The analysis shows that farmers from all educational backgrounds—school level, graduates, and those with no formal education—reported varying levels of awareness regarding government schemes related to *Gloriosa superba* (Kanvali Seed) farming. Among the respondents, the most recognized schemes were PM-Kisan (32 responses), followed by PMFBY (25 responses), and National Ayush Mission (NAM) (16 responses). Despite this variation, the Chi-Square test result ($p = 0.601$) indicates that there is no significant association between educational qualifications and awareness of subsidy schemes. Awareness levels appear to be evenly distributed regardless of educational attainment.

CONCLUTION

The study highlights that *Gloriosa superba* farmers represent a varied demographic, with most being young adults and graduates. Farming is mostly done on small to medium scales with moderate initial production costs. While government schemes like NAM, PM-Kisan, and PMFBY are known to many, the statistical analysis shows **no significant influence of educational qualification on awareness** or **subsidies on the scale of farming**. This suggests that current subsidy programs, while present, may not be effectively driving growth or awareness and require better outreach and implementation to make a tangible impact on cultivation practices.

REFERENCES:

Umavathi, S., Gopinath, K., Manjula, M. S., Chinnasamy, B., & Ayyakannu, A. (2020). *Gloriosa superba* L: A critical review of recent advances. *Abasyn Journal of Life Sciences*, 3(2), 48–65.

Cost and returns from the cultivation of Gloriosa superba, B Vanitha - Economics 2 (6), (2013)

Gloriosa superba (L.): a brief review of its phytochemical properties and pharmacology, Ashokkumar, K. (2015)

BIBLIOGRAPHY

https://ajlifesciences.com

https://www.researchgate.net

https://www.worldwidejournals.com