

Market-Linked Entrepreneurship: From Village to Market — How Women SHGs in Medak through EGVF KVK are Turning Aloe Vera Soap Production into Profitable Enterprises...A CASE STUDY

Bhargavi Gugulothu¹, Dr. Sambaji Nalkar²

¹Scientist HS ICAR EGVF-KVK Medak Telangana

²Senior Scientist & Head ICAR EGVF-KVK Medak Telangana

Abstract:

In the semi-arid regions of Medak, Telangana, the transition from subsistence farming to high-value agro-processing represents a paradigm shift in rural economics. This case study evaluates a strategic intervention by the EGVF Krishi Vigyan Kendra (KVK), which facilitated the transformation of 200 rural women into skilled entrepreneurs. By specializing in the production of handmade Aloe vera soaps, these women have bridged the gap between raw agricultural output and urban consumer demand. The study details a production model where 6 core members produce 150 soaps daily, achieving a 34% profit margin (Cost: Rs. 66; Sale Price: Rs. 100). Furthermore, the initiative has successfully integrated crop diversification, providing local farmers with a stable income stream by supplying raw Aloe vera. The results underscore the efficacy of market-linked training in creating self-sustaining, community-led enterprises.

Keywords: Self-Help Groups (SHGs), Aloe Vera Value Addition, EGVF KVK, Rural Micro-Enterprise, Medak District, Crop Diversification, Market Linkage.

1. INTRODUCTION

Rural development strategies in India are increasingly focusing on the "Secondary Agriculture" sector—where the value is added to primary produce before it reaches the consumer. In the Medak district of Telangana, the climate is ideally suited for Aloe vera (*Aloe barbadensis miller*), a plant known for its low water requirement and high medicinal value. However, despite its growth potential, local farmers historically struggled with low market prices for raw leaves.

The EGVF Krishi Vigyan Kendra (KVK) identified this gap and launched a comprehensive "Village-to-Market" initiative. By targeting 200 women from the villages of Pothreddipally, Tuniki, Mutrajpally, and Rangampet, the KVK aimed to create a decentralized manufacturing hub. This case study documents how technical skill-building, coupled with financial discipline and market-oriented branding, has turned a simple household activity into a professional, profitable enterprise.

2. REVIEW OF LITERATURE

The concept of Market-Linked Entrepreneurship for Self-Help Groups (SHGs) is rooted in the "Value Chain Approach." According to the World Bank (2022), rural poverty is often a result of "disconnected production"—where producers have no link to the final consumer.

- Value Addition: Processing raw Aloe vera into soap increases the shelf life and the economic value of the crop by over 300%.
- SHG Dynamics: Research by NABARD suggests that SHGs perform best when they move beyond micro-finance (saving/lending) into micro-enterprise (manufacturing/marketing).
- The "Handmade" Trend: There is a burgeoning urban market for sulfate-free, chemical-free personal care products. The "Handmade" tag allows rural groups to command a premium price (Rs. 100 per 100g) that competes with boutique organic brands.

3. METHODOLOGY

This research utilizes a Mixed-Methods Case Study approach, combining quantitative financial data with qualitative field observations.

3.1 Selection and Training

A total of 200 women were mobilized from the four target villages. The training curriculum was divided into three modules:

1. Training farmers on organic Aloevera cultivation to ensure a high-quality, pesticide-free raw material supply.
2. Processing: Teaching the "Cold Process" soap-making method, which ensures the vitamins and enzymes in Aloevera remain intact.
3. Enterprise Management: Lessons on unit costing, inventory management, and hygienic packaging.

3.2 Operational Framework

To ensure consistency, a "Hub and Spoke" model was adopted. While 200 women were trained to provide a large labor pool, a core group of 6 women was established to manage daily production at the EGVF KVK facility to maintain strict quality control.

4. RESULTS AND DISCUSSION

4.1 Quantitative Analysis of Production Economics

The financial sustainability of the Aloevera soap enterprise is predicated on a high-margin unit economic model. Unlike traditional agricultural commodities where profit margins often hover between 10% and 15%, the value-added soap model achieves a 34% net profit margin.

4.1.1 Unit Cost Breakdown (Per 100g Bar)

The "Making Cost" of Rs.66 was achieved through a strategic combination of bulk procurement and localized sourcing.

- Raw Material Inputs (Rs.48.00): This includes base oils (Coconut and Castor oils), caustic soda, and the primary active ingredient—fresh Aloe vera pulp. Sourcing pulp directly from local farmers in Pothreiddipally and Tuniki reduced the "Farm-to-Factory" logistics cost by 18% compared to sourcing from urban distributors.
- Packaging and Branding (Rs.10.00): To justify a market price of Rs. 100, the product required professional, eco-friendly packaging. This includes biodegradable shrink-wrap and labels that highlight the "Handmade in Medak" origin.
- Operational Overheads (Rs.8.00): This covers electricity for mixing equipment, water usage, and the cost of transport to local retail outlets.

4.1.2 Scalability and Revenue Projections

The study tracked the performance of a core group of 6 women working on a regular basis. With each woman producing 150 soaps per day, the monthly output of the specialized unit is 4500 units.

Table 1: Showing daily and monthly production of aloevera soaps

Metric	Individual Value	Monthly Production of 2 women
Production Volume	150 Units	4500 Units
Gross Revenue (at Rs. 100)	Rs. 15,000	Rs. 4,50,000
Production Cost (at Rs. 66)	Rs. 9,900	Rs. 2,97,000
Net Profit	Rs. 5,100	Rs. 1,53,000

This level of productivity demonstrates that a small, specialized team can generate a monthly surplus exceeding Rs.1.53 Lakhs (assuming 30 working days), creating a powerful economic engine for the participating villages.

4.2 Impact on Crop Diversification and Farmer Income

One of the most significant findings of this case study is the positive feedback loop created for local farmers through crop diversification.

4.2.1 From Subsistence to Commercial Aloe Cultivation

Farmers in Mutrajpally and Rangampet have traditionally relied on rain-fed crops like maize. By diversifying into Aloe vera to supply the SHG unit, they have mitigated climate risks.

- Income Enhancement: Farmers reported a net increase in income of Rs. 12,000–15,000 per acre due to the "Buy-Back" arrangement with the SHG production unit.
- Resource Efficiency: Aloe vera requires 70% less water than traditional cereal crops, making it an ideal choice for the semi-arid climate of Medak.
- Waste Reduction: Previously, over-mature Aloe leaves were discarded. Now, 100% of the harvest is absorbed by the soap-making unit, ensuring zero wastage at the farm level.

4.3 The "Market-Linked" Success Factors

4.3.1 The Role of EGVF KVK as an Incubation Hub

The success of the 200 trained women was not merely a result of skill acquisition but of institutional scaffolding. EGVF KVK acted as a quality assurance body. By centralizing the production for the 6 core workers at a designated facility, the "Medak Aloe Soap" maintained a consistent pH level and fragrance profile—factors that are often the downfall of decentralized rural SHGs.

4.3.2 Social Empowerment and Labour Specialization

The decision to train 200 women but employ 6 on a high-intensity regular basis represents a sophisticated understanding of Labour Specialization.

- The 200 women serve as a "Ready Reserve" and community advocates, ensuring the brand has deep roots in the villages.
- The 6 core workers develop "Expertise Efficiency," allowing them to hit the target of 150 soaps per day, which requires significant precision in chemical mixing and curing time management.

4.3.3 Market Positioning

Selling a soap for Rs. 100 in a market dominated by mass-produced bars (priced at Rs. 30–40) was a strategic risk. However, by targeting the "Wellness" and "Organic" segments, the SHGs successfully avoided price wars. Consumers perceived the Rs.100 price point as an indicator of purity and social contribution, effectively turning the "Village Origin" into a marketing asset.

4.4 Challenges and Mitigation

During the study, it was observed that during peak summer, Aloe pulp moisture content varies.

Mitigation: EGVF KVK introduced standardized dehydration protocols and digital pH testers to ensure the soap quality remained uniform across all seasons.

4.4.1 Financial Viability (Unit Economics)

The success of the Medak model is driven by its lean cost structure. The cost-to-profit analysis for a single 100g soap bar is as follows:

Expenditure Item	Cost (INR)
Raw Materials (Oils, Caustic Soda, Fresh Aloe Pulp)	45.00
Essential Oils & Natural Fragrance	8.00
Packaging, Labelling & Marketing	8.00
Utilities & Logistics	5.00
Total Production Cost (COGS)	66.00
Market Retail Price (MRP)	100.00
Net Profit per Bar	34.00

4.4.2 Production Capacity and Income Generation

The core production team (6 women) has achieved high operational efficiency:

Daily Production: 150 soap bars.

Monthly Production (30 days): 4,500 soap bars.

Annual Capacity: Approx. 54,000 soap bars.

On a monthly basis (30 working days), the unit generates a net profit of Rs. 1,53,000, which is distributed among the producers after reinvesting a portion into raw materials.

4.4.3 Impact on Crop Diversification

The enterprise has created a "Buy-Back" guarantee for farmers in Pothreddipally, Tuniki, Mutrajpally and Rangampet.

- Income Stability: Farmers who transitioned from paddy or maize to Aloe vera report a 25% increase in per-acre income due to reduced water and fertilizer costs.
- Ecological Benefit: Aloe vera cultivation has improved soil resilience in the drought-prone Medak region.

5. DISCUSSION

The success of the "Village to Market" initiative in Medak is not merely a result of teaching a craft; it is the result of a meticulously designed Value Chain Intervention. The following sections discuss the critical success factors that allowed this enterprise to scale.

5.1 The Economic Logic of Value Addition

The jump from a Rs. 66 production cost to a Rs. 100 retail price is the most significant achievement of this model. In traditional rural economics, raw materials (Aloe leaves) are sold for a pittance (approx. Rs. 15–20 per kg). By processing these leaves into soap, the value of the raw material is effectively multiplied by 500%.

This "Value Addition" allows the SHGs to capture the "Consumer Surplus" that usually goes to large multinational corporations. The 34% net profit margin serves as a financial buffer, allowing the group to

pay fair wages to the "Specialized Six" production team while maintaining a revolving fund for raw material procurement from local farmers.

5.2 Specialization vs. Generalization

A common pitfall in SHG projects is the attempt to involve every member in every stage of production. This study finds that the Specialized Labor Model adopted here was superior:

- The Trained 200: This group provides the "Social Infrastructure." They ensure community buy-in, manage the local supply of Aloe vera from their family farms, and act as brand ambassadors.
- The Core Six: By dedicating six women to produce 150 soaps each per day, the unit achieved Industrial Efficiency in a cottage-industry setting. This specialization led to:
 - Consistency: Every soap bar has the same texture, color, and scent.
 - Speed: The group can fulfill bulk orders of 5,000 units for corporate gifting or exhibitions within a month.

5.3 Synergy with Crop Diversification

The discussion must highlight the environmental and agricultural resilience built through this project. In villages like Mutrajpally and Rangampet, climate change has made water-intensive crops (like paddy) risky.

- Market-Linked Cultivation: Farmers are not just "growing Aloe"; they are growing a specific raw material for a guaranteed buyer (the SHG). This eliminates the Price Volatility typically seen in wholesale markets (Mandi).
- Sustainability: Aloe vera is a "low-input" crop. The reduced need for chemical fertilizers and pesticides aligns with the "Organic" and "Natural" branding of the finished soap, creating a clean production cycle.

5.4 Technical Scaffolding by EGVF KVK

The "Market-Linked" aspect of this entrepreneurship would have failed without the Technical Scaffolding provided by the KVK.

- The Quality Gap: Rural products often fail in urban markets due to poor packaging or inconsistent quality. EGVF KVK bridged this gap by introducing standardized Cold-Process Saponification (which preserves the vitamins A and E in Aloe) and professional pH testing.
- Branding as Empowerment: The KVK helped the women move away from "pity-purchasing" (buying because the producers are poor) to "value-purchasing" (buying because the soap is superior to commercial alternatives).

5.5 Socio-Economic Empowerment and Identity

Beyond the financial results, the transition from Pothreddipally, Tuniki, Mutrajpally, and Rangampet to the "Market" has redefined the identity of these women. They are no longer viewed as "unskilled labor" but as "Technical Producers." * The Multiplier Effect: The income of Rs. 34 per soap directly influences household nutrition, children's education, and women's decision-making power within the family.

- Community Pride: The fact that a product from their small village is sold in urban retail centres for Rs. 100 has fostered a sense of collective agency and entrepreneurial spirit across the district.

5.6 Challenges and Strategic Mitigation

The discussion acknowledges that maintaining a Rs. 66 cost is challenging amid rising prices of base oils (Coconut oil/Caustic soda).

- Strategy: The SHGs are now exploring Collective Bulk Procurement through a federation of groups to keep the raw material costs stable.

- Supply Chain: During monsoon months, curing time increases from 4 weeks to 6 weeks due to humidity. The unit is planning to invest in "Dehumidification Chambers" using a portion of their accumulated profits to ensure year-round production.

6. CONCLUSION

The transition of women Self-Help Groups (SHGs) in Medak from subsistence-based labor to Market-Linked Entrepreneurship represents a transformative shift in the rural economic landscape of Telangana. This case study of the EGVF KVK intervention demonstrates that rural micro-enterprises are not only socially desirable but economically robust when grounded in sound financial and technical principles.

The EGVF KVK intervention in Medak stands as a blueprint for rural India. It proves that with a structured making cost of Rs. 66 and a strategic price point of Rs. 100, rural women can compete in the mainstream FMCG (Fast-Moving Consumer Goods) market. The initiative has achieved a triple bottom line: Economic (34% profit), Social (empowering 200 women), and Environmental (promoting drought-resistant crop diversification).

This model is highly scalable and can be replicated for other herbal products, ensuring that the "Village to Market" journey remains a permanent path to prosperity.

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