



Women-Led Finger Millet Enterprises: Empowering Rural Economies through Value Addition

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ABSTRACT

Finger millet (*Eleusine coracana* L.), a climate-resilient and nutrient-rich cereal, holds immense potential to boost nutrition security and rural income. In recent years, women-led finger millet enterprises have emerged as a transformative model for sustainable rural development. These ventures, driven by women's self-help groups (SHGs) and community-based organizations, focus on value addition through the production of ready-to-cook and ready-to-eat millet-based products. The enterprises improve not only the household incomes and employment in the local areas but also empower women to strengthen their leadership skills, monetary independence and stature in society. This paper discusses how women-led millet enterprises, with the help of grassroots programs and policy measures, can be of importance and real-world case studies of how such examples succeeded, failed, and were replicated in remote India.

Keywords: Enterprises, Finger Millet, Self Help Group (SHG), Women

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1. INTRODUCTION

The Finger millet (*Eleusine coracana* L.) also well known as Ragi or Mandua, is an extremely nutritious cereal crop. It is native to the African and South Asian dry and semi-dry lands (Teena et al., 2019). It is also known to grow well in poor soil conditions and even in extreme weather, a phenomenon which makes it a vital foundation diet in regions in eastern and central Africa and also in India. In India Karnataka is responsible in supplying the greater percentage of finger millet and it contributes about 58% to the total supply of finger millet in the world but few people are aware of its health and nutritive values. Finger millet has been traditionally

known as a Poor man's crop, which has the capacity to store safely up to a long time without any serious pest or insect problem (Teena et al., 2019). Finger millet has become a popular crop that has been considered as a crop essential in sustainable agriculture these days. It is also developing a brand name regarding the level of nutrition thus forming new sources of rural prosperity, particularly in the women-led projects that emphasize product diversification and value addition (Pradhan et al., 2025).

2. BENEFITS OF FINGER MILLET

Finger millet (*Eleusine coracana* L.) grows in dry and drought ravaged parts of India and is also

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highly adapted to difficult climates. It has earned the reputation of being a nutrient-rich grain because it contains high amounts of calcium, iron, fibre, and natural antioxidants (Sahoo et al., 2025). Its fiber content is high, which leads to improved digestive health and glycemic control, and it can be helpful to people with diabetes and metabolic disorders (Patel et al., 2025). Nonetheless, its hard seed, and labor required after harvest have among the things that made its use limited in the past. This is starting to change recently particularly in rural women, who have been pioneering the small-scale companies (Pradhan et al., 2025). They are opening the commercial and nutritional potential of the raw finger millet by converting it into convenient and delicious foods, as well as interesting and practical mixes, conventional foods, and health-oriented snacks (Satapathy et al., 2021).

3. VALUE ADDITION IN FINGER MILLET

Enhancing the worth of finger millet brings advantages that is much more than just generating income. It contributes to minimizing harvest-related losses, extends product usability, and improves market attractiveness. Urban consumers, driven by increasing interest in nutritious foods, are showing growing interest in items such as millet-based noodles and energy snacks (Kavitha et al., 2022; Badavath et al., 2024). Women-led businesses are successfully blending traditional food practices with updated methods of packaging and selling, thereby connecting rural producers with city-based buyers. Every stage of the millet production i.e. from growing and processing to marketing and final sales, offers work opportunities within local communities (Moharana et al., 2020). This system not only benefits the women managing the enterprises but also provides income for nearby farmers, logistics providers, craft workers, and shop owners, leading to a more interconnected and resilient village economy (FAO, 2019).

4. CASES OF WOMEN-LED ENTERPRISES

4.1. *Mandia SHG Enterprises in Odisha*

In Kandhamal district of Odisha, the Odisha Millet Mission (OMM), initiated in 2018 by the Department of Agriculture & Farmers' Empowerment, empowered tribal women through Self-Help Groups (SHGs) to lead value-added finger millet enterprises. With support from NGOs like NIRMAN and Living Farms, a 12-member SHG in Daringbadi received training in processing, packaging, branding, and business management, launching their own product line, "Mandia Magic," which includes cookies, ladoos, malt powder, and

chhatua mix. This initiative increased individual incomes from less than ₹1,500 to over ₹6,000 per month, while also promoting traditional food revival, improved nutrition awareness, and stronger roles for women in community leadership. The group was able to expand sustainably and establish motivation among other SHGs in 17 districts despite its initial marketing and technical issues (Odisha Millet Mission, 2022).

4.2. *Sri Shakti Millet Producers Group, Tamil Nadu*

The Millet Sisters Network is an experiment began in 2016 in Telangana by the Deccan Development Society (DDS), which recruited more than 3,000 women to convert to millet-based production systems. These women were empowered in taking care of native seed preservation, environmentally friendly crop production and food production using millet. They opened up micro-enterprises to sell products such as finger millet flour, ragi vermicelli and geographically inspired sweets, along with community seed banks and community kitchens. Besides bringing back the ancient knowledge of farming to life, it created a closed-loop rural economy and raised family incomes by as much as 50% and raised nutritional levels of families, especially children and new moms (DDS, 2021).

4.3. *Millet Sisters Network, Telangana*

A group of twenty-five women in Dharmapuri district, Tamil Nadu where millet cultivation is most common, formed the Sri Shakti Millet Producers Group in 2018 through the backing of Tamil Nadu State Rural Livelihoods mission (TNSRLM). The women with the support of District Rural Development Agency (DRDA) have started a finger millet-based business that makes flour, laddus, and cookies. They were also given fundamental training on sanitation, quality of their products and how to run their enterprises in addition to the seed funding they got. Two years on it has gone to providing mid-day meals in schools as well as broader markets created by holding exhibitions in cities and collaborating with other organic stores. Their salaries grew by six times a month, and the members mentioned gaining more leadership positions and increased authority in decisions making within their settlements (TNSRLM, 2020).

4.4. *Sahyadri Women's Millet Federation, Maharashtra*

The lack of uniformity in rainfall in Kolhapur, where women have been affected in the agricultural sector, has seen more than 500 women organize themselves in Sahyadri Women Millet Federation that

championed the use of the finger millet that is sustainable. The group took a loan of INR 50,000 to start a millet processing centre in 2017 with financial and technical assistance of NABARD and Mahila Arthik Vikas Mahamandal (MAVIM). They created and sold different products based on millet like ragi dosa mix, malt drinks, nutrition bars, mixing both modern packaging and time-old recipes to attract urban population, health-conscious people in Pune and Mumbai. The federation generated an annual turnover of over 25 lakhs by the year 2021 out of which a certain amount was contributed to social causes such as girl child education and domestic nourishment through kitchen gardens (NABARD, 2021).

5. CHALLENGES AND THE WAY FORWARD

Although women-led millet ventures have attained a great degree of progress, they continue to experience numerous challenges. These include challenges in securing loans, inadequate facilities for processing, weak connections to broader markets, and persistent social limitations. Addressing these issues will require focused actions like training women in digital tools, using mobile apps for better market access, and implementing inclusive policies that support women in business (Saha et al., 2024). Equally vital is the need for wider recognition and structured backing from institutions. Encouraging millet use through government food schemes, school nutrition programs, and health awareness drives can help build consistent demand. Global efforts like the UN's declaration of 2023 as the International Year of Millets have already helped bring attention to such initiatives (FAO, 2023).

6. CONCLUSION

Enterprises led by women in finger millet processing are driving a strong yet often overlooked shift in rural India. By turning raw crops into diverse food products, they are reshaping farming-based businesses by merging age-old practices with fresh ideas. As these efforts expand, they not only improve local livelihoods but also contribute to building a fairer and more lasting approach to food and nutrition.

REFERENCES

- Badavath, A., Prusty, A.K., Meena, L.L., Pradhan, S.K., Rathna, G., Chakraborty, S. (2024) Enhancing agriculture with digital transformation through human-computer interaction. *Int J Agric Extension Social Dev*, 7(4):628-636. <https://doi.org/10.33545/26180723.2024.v7.i4h.582>
- DDS. (2021). Reviving Millets, Restoring Livelihoods: A Community-Centric Approach to Sustainable Farming.
- FAO. (2019). The State of Food and Agriculture 2019: Moving forward on food loss and waste reduction. Food and Agriculture Organization of the United Nations.
- FAO. (2023). International Year of Millets 2023. Food and Agriculture Organization of the United Nations. <https://www.fao.org/millets-2023>
- Kavitha, K., Rani, S. S., & Kiran, Y. (2022). Market potential of millet-based value-added products in urban India. *Indian Journal of Agricultural Marketing*, 36(1), 89-97.
- Moharana, D., Bahadur, V., Rout, S., Prusty, A. K., & Sahoo, R. K. (2020). Ashwagandha: The miracle ginseng. *Food Sci. Rep*, 1, 37-42.
- NABARD. (2021). Women-Led Enterprises for Sustainable Agriculture. Mumbai: NABARD. <https://www.nabard.org>
- Odisha Millet Mission. (2022). Annual Report on Promotion of Millets in Tribal Areas of Odisha. Department of Agriculture & Farmers' Empowerment, Government of Odisha.
- Patel, M.A., Tiwari, C., Rout, P. & Rajput, S. (2025). Innovations in Breeding and Biofortification for Advancement in Finger Millet (*Eleusine coracana* L.) Production and Nutritional Enhancement. *AGRI MAGAZINE*, 2(4), 259-262. <https://doi.org/10.5281/zenodo.15336258>
- Pradhan, S.K., Nayek, D., Muduli, S., Patel, M. A., Padhy, C. and Mandal, A. (2025). Revolutionizing Indian Agriculture with Drones: A Comprehensive Review of Applications, Challenges and Future Prospects. *Journal of Geography, Environment and Earth Science International*, 29(3):74-81. <https://doi.org/10.9734/ijgeesi/2025/v29i3874>
- Pradhan, S.K., Prusty, A.K., Das, S., Ghosh, M., Chandra, Y.B. and Nayak, S. (2025) Empowering small-scale agriculture: Effective strategies for technology transfer. *International Journal of Advance Biochemistry research*, 9(3):118-125. <https://doi.org/10.33545/26174693.2025.v9.i3b.3902>
- Saha, P., Prusty, A. K., Nanda, C., Ray, S., & Sahoo, B. (2024). Professional insights provided by women extension personnel in Odisha. *Indian Journal of Extension Education*, 60(3), 101-105. <https://doi.org/10.48165/IJEE.2024.603RN03>
- Sahoo, B., Rout, D.S., Tripathy, P., Sahoo, S.L., Pradhan, S.K. and Mahanta, C.K. (2025). Women's empowerment in aquaculture: a path analysis of economic and social influences in Southern Odisha, India. *Aquaculture International*, 33(126). <https://doi.org/10.1007/s10499-024-01811-x>
- Satapathy, A., Satapathy, A., Rout, D. S., Prusty, A. K., & Rout, S. (2021). Prevalence of protein energy malnutrition among under-five children in Odisha: a review. *J Phytopharm*, 10, 272-6.
- Tamil Nadu State Rural Livelihoods Mission (TNSRLM). (2020). Empowering Rural Women through Millet-Based Enterprises in Tamil Nadu.
- Teena, M., Gopikumar, S., & Sundaresan, S. (2019). Value addition and marketing strategies for small millets – A study in Tamil Nadu. *Indian Journal of Agricultural Marketing*, 33(3), 115-123.