



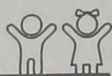
Women-Led Nutrition

Gaya's Fortified Take Home Ration (THR) Production Plant
as a Model of Empowerment

Nutrition Indicators of Bihar

43 out of 100

Children under five are
shorter for their age



23 out of 100

Children are underweight



Source: NFHS-5.

Anemia in Bihar

60 out of 100

Women between the age of
15 to 49



52 out of 100

Pregnant women

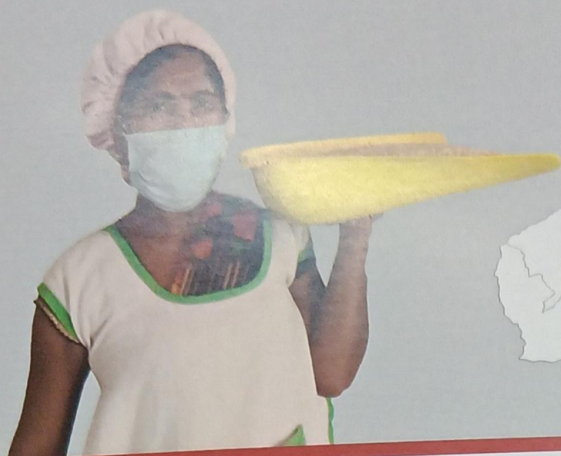


Source: NFHS-5.

Introduction

By ensuring adequate nutrition among pregnant women, lactating mothers, infants and children, the Government of India is committed to fostering healthier generations and achieving the 'Viksit Bharat' (Developed India) goal.

As a cornerstone to this commitment, network of Anganwadi Centres (AWC), under Integrated Child Development Services (ICDS) scheme, of the Ministry of Women & Child Development plays a critical role. This scheme effectively addresses the nutrition need of children (upto 3 years) and pregnant & lactating mothers. Under this initiative packaged Take-Home Ration (THR) is distributed to the target groups. The guidelines issued by Government of India, strongly advocate for decentralised and community-based production of THR in the country.



Guidelines by Government of India

The Supplementary Nutrition (under the Integrated Child Development Services Scheme) Rules, 2017: Rule 9 of the SNP Rules, 2017 provides for engagement of Self-Help Groups (SHGs), and ensures supply and quality of Supplementary Nutrition through them.¹

Hon'ble Supreme Court Order dated 07.10.2004 and 26.02.2019: The Supreme Court of India vide order dated 07.10.2004 directed that contractor shall not be used for supply of nutrition in AWCs, and preferably ICDS funds shall be utilized by making use of village communities, SHGs, and Mahila Mandals for buying of grains and preparation of meals. Further vide order dated 26.02.2019, the Hon'ble Supreme Court directed that THR supply should be decentralized as much as possible, as it is not for the big players/ industrialists in the field to cater to the needs of the Scheme.^{2 & 3}

THR Production Plant in Gaya

Embodying the government guidelines, the THR production plant was established in 2014 at Sahaydeo Khap village in Bodhgaya Block of Gaya, Bihar as a collaborative effort between GAIN and Nidan, with support from Bihar Rural Livelihoods Promotion Society (BRLPS). Roushan Jeevika Mahila Gram Sangathan (Village Organisation) took ownership of the plant to produce packaged, fortified, THR. The plant was built on rented land covering an area of 5000 sq. ft. It delivers packaged THR to the beneficiaries through 225 AWCs in Bodhgaya Block and 160 AWCs in the Dobhi Block providing to a total of

9514 children including those suffering from "Severe and Acute Malnutrition (SAM)" and **1075** pregnant and lactating mothers.

This initiative exemplifies how a Village Organisation (VO)—comprising 18 Self-Help Groups (SHGs) and **235 women**—can simultaneously champion nutritional improvements for vulnerable local groups and ensure sustainable livelihoods at the village level. By layering a fortified food-production program onto an existing VO structure, the project demonstrates best-practice convergence of economic empowerment and public health.

Plant management by women collective

The THR production plant is registered as a proprietary concern owned by the Roushan Jeevika Mahila Gram Sangathan (VO), with the VO President as the identified proprietor. The Cluster Level Federation (CLF) is involved in supervision and monitoring of daily operations and quality control; administrative support; and discussing new ideas for innovation with Block/District and technical partners. BRLPS provides need-based support in areas such as administrative and organizational development through capacity building, human resources management, documentation, convergence with line departments, statutory compliance, and support in establishing market linkages.

The THR production plant currently employs **40 SHG** women on a rotating basis, organized into three shifts with typically 13 women and 7 men per shift. Men, drawn from SHG households, perform physically demanding, unskilled tasks like feeding raw materials

into machines, while women lead the technical preparation of THR using wheat, rice, pulses, vitamins, and mineral premix. All participating women are documented (e.g., Aadhaar-enabled) and legally eligible to work. Importantly, they actively engage in day-to-day operational decisions alongside the plant manager—appointed in 2015 and trained through multiple capacity-building programs—thereby bolstering their agency, leadership, and technical skills.

This model aligns with robust evidence showing that SHG membership significantly enhances women's empowerment, notably through greater control over income, decision-making authority, and participation in community-sponsored enterprises. By integrating SHG women into meaningful technical roles and involving them in governance, the THR plant not only delivers vital nutrition but also cultivates social capital, strengthens agency, and fosters sustainable livelihoods—demonstrating a scalable model that merges economic empowerment with public health impact.



Technical team along with SHG women managing the Gaya Plant

Key features of plant operations:

Facility- layout, utilities and production parameters

The plant houses 12 specialized machines, with designated storage chambers, generator, water supply, toilets, and a dining space. Packaged THR is stored on wooden pallets to maintain quality. It produces over 35 metric tons of THR monthly for the ICDS program.



Hygiene & sanitation practices

Adherence to stringent quality and hygiene standards is paramount. The plant procured FSSAI license in 2018, renewed annually.⁵ Workers receive regular training on food safety, GHP, and GMP, and use protective gear (caps, aprons, masks). Daily cleaning of equipment and premises, along with hygienic packaging and sealing, ensures contamination-free delivery to Anganwadi Centres.



Raw-material sourcing and vendor management



Grains and pulses (wheat, rice, sugar, pulses) were initially purchased from the open market but are now procured through BRLP's retail venture, Grameen Bazaar.



Vitamin-mineral premix is sourced exclusively from a verified seller.



Packaging materials arrive quarterly from an outstation supplier.



Procurement process: Raw materials are ordered monthly. Vendors deliver full batches, and payment is made post-delivery. Freight costs are included in vendor quotes and covered by them.



Storage: All raw materials are stored on wooden pallets and do not require special conditions.

Daily Operations and Production Capacity

plant can produce upto 2.5 metric tons of THR per day. For bulk orders, it operates three shifts around the clock throughout the month to fulfil ICDS delivery.



Distribution & Logistics



Finished THR is delivered to cluster points in Gram Panchayats across Bodhgaya and Dobhi, from where Anganwadi Workers collect it. Freight is covered by the plant. ICDS distributes THR and dry rations on alternate months. The product is not sold in retail and is supplied exclusively through ICDS in Gaya district.

Growth & Resilience

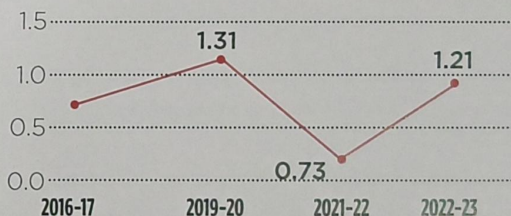
The plant operated profitably after securing consistent ICDS orders. Revenue dropped from ₹1.31 cr (FY 2019-20) to ₹0.73 cr (FY 2020-21) due to COVID-19 but rebounded to ₹1.21 cr in FY 2021-22 after expanding to Dobhi block. From 2022-24, monthly orders stabilized at 20 MT, and the plant has earned a cumulative profit of ₹35 lakh since inception.

THR Production Plant Performance (2016-2024)

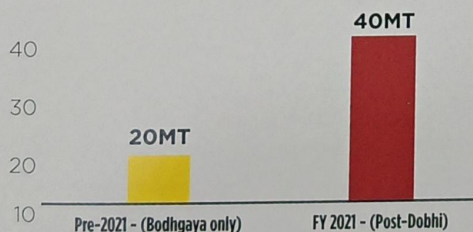
Timeline Highlights

2016	Secured ICDS orders
2020-21	Peak profitability
2019	Covid 19 impact
2021-22	Expansion into Dobhi block
2022-24	Stabilized operations

Profit Trend Chart in "Crore"



Order Volume (monthly average)



Key Stats

₹35 lakh cumulative profit

Max: 1.31 cr (FY20)

COVID dip: ₹0.73 cr (FY21)

Dobhi boosted avg. orders to

42 MT/month

Based on sales data, the unit projects an annual sale of 359,400 packets at ₹63.75 each. Each worker receives a daily wage of ₹279.

Significant Catalyst – Growth Enablers for THR production Plant

Various key enablers played vital role to strengthen THR production plant while tackling malnutrition, including undernutrition. Some of the notable factors are -

Led and run by women SHG members

Managed by SHG women of Roushan Jeevika Mahila Gram Sangathan, the plant delivers fortified food to local families while creating sustainable livelihoods. With support from GAIN-Nidan and BRLPS/JEEVIKA, it empowers women through skills, income, and leadership, transforming social norms and enhancing their public participation and decision-making power.



Product credibility

THR produced at the plant is fortified and FSSAI-compliant, with regular lab testing. Technical support from GAIN ensures quality assurance. Strict adherence to food safety and hygiene standards has built strong trust among beneficiaries who consume it regularly.



Sustainable livelihoods

Since 2014, the plant has created sustainable livelihoods for SHG women, enabling investments in education, health, and savings. Beyond income, it fosters financial literacy and social capital, driving both household upliftment and broader community development.



Financial Linkages

Financial Linkages plant empowers women financially by facilitating bank account access, enabling them to receive salaries directly and gain practical banking experience through regular visits. This integration with formal banking systems aligns with India's broader push via PMJDY (Pradhan Mantri Jan Dhan Yojana), which has significantly increased women's financial inclusion—raising account ownership from 53% in 2015-16 to 79% by 2021-22 in Bihar alone.



Team engagement in positive plant advocacy

In the initial phase, the plant workers actively counselled community members about health benefits and the nutritive value of THR. They offered THR pudding (halwa) to beneficiaries in AWCs on some occasions. Gradually, this augmented their trust and confidence, thus target groups started consuming THR regularly at home, which helped in improving health outcomes in communities.



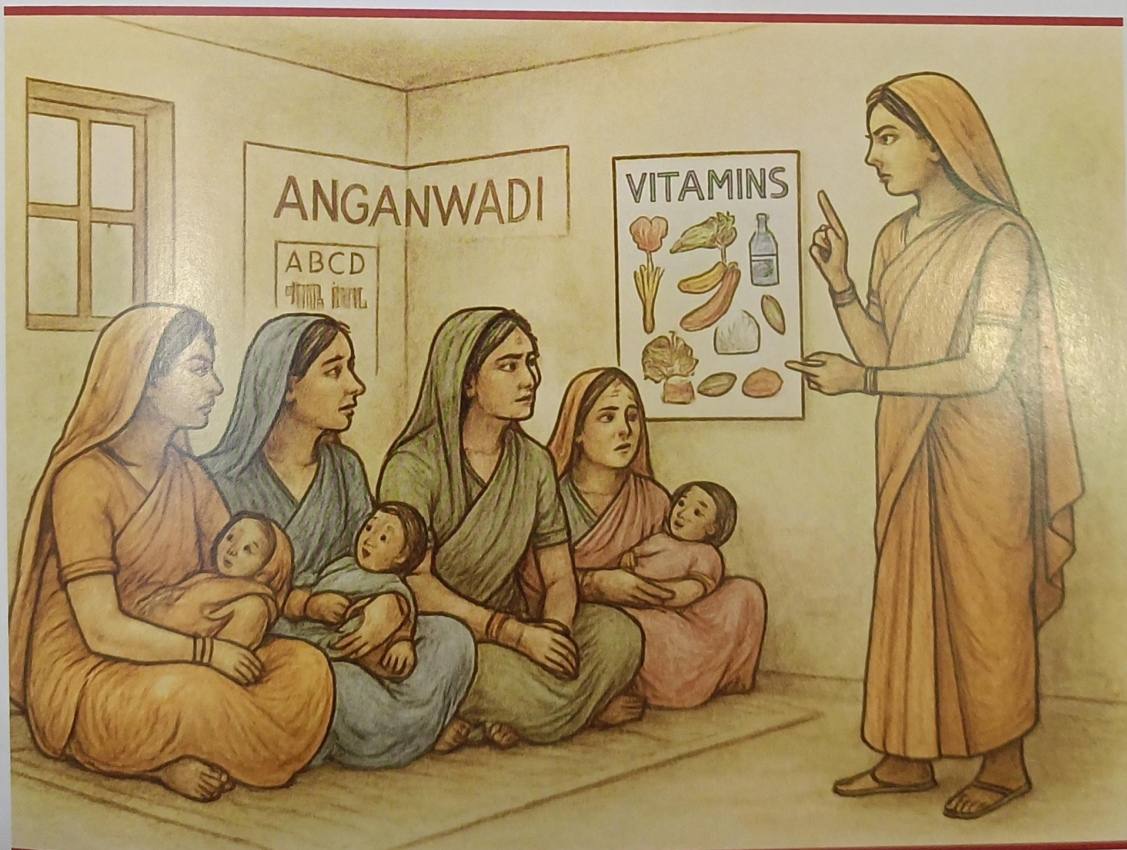
Inclusion of SHG members family in plant operations

The plant's inclusion of male members from SHG households enhances both economic and social outcomes. Men take on physically demanding, unskilled tasks—such as feeding raw materials into machines—creating local employment and increasing household income. This allows women to focus on technical aspects of THR preparation, strengthening their leadership and skillsets. By assigning roles based on capacity and skill, the plant fosters shared responsibility, promotes gender-balanced collaboration, and demonstrates how community-driven development thrives on inclusive participation.



Uninterrupted-supply chain

The plant is receiving consistent order from ICDS, even during the difficult times of the COVID-19 lockdown, the plant continued its operations, demonstrating its operational resilience and the strength of its public-sector partnerships. This continuity not only safeguarded women's employment and income but also ensured uninterrupted access to essential nutrition for vulnerable children, pregnant, and lactating women in Gaya—a critical success in the plant's mission-aligned performance.



Multi-Stakeholder Convergence

Supported by the State and District teams of BRLPS, and technical partners like GAIN-Nidan, plant workers actively reinforce convergence mechanisms through the consistent delivery of THR, leading to measurable improvements in health and nutrition outcomes across communities. By combining community participation with institutional support, the initiative advances sustainable food systems and women's leadership, exemplifying how inclusive governance and technical partnerships can amplify social impact at the village level.



Upholding trust in a dynamic ecosystem

The plant adapted well to challenges, ensuring continuity and community trust. When rumours arose about the safety of fortified THR, the team quickly held sessions with Anganwadi workers, local leaders, and health officials to explain the science and safety of fortification. They also addressed a legal challenge by working with technical and legal experts to prove compliance with FSSAI standards, lab results, and packaging protocols. These proactive steps—including community engagement, advocacy, and transparent documentation—helped reassure authorities and strengthened trust in both the product and the process.



SHG member working in the plant

Development of social capital



The consistent capacity building of SHG women through refresher training acted as a catalyst for their personal growth and empowerment, translating into stronger social bonds, increased trust, and enhanced co-operation within communities, skill enhancement, thus contributing to the development of social capital.

Plant profitability

The plant has maintained overall profitability, but its core profit margin suffered a significant blow in between due to a price reduction by ICDS in 2019-20 - the unit rate per kilogram of the THR was brought down from 65.5 INR to 63.75 INR. However, new opportunities, such as the service delivery to the Dobhi Block, positively impacted the profit margins, indicating a potential turnaround or diversification of revenue streams with better profitability. Further analysis is required to understand the long-term sustainability of these improved margins and overall sustained periodic income by the plant.



Plant innovations



The plant piloted a savoury snack, reminiscent of the popular “Kurkure”, by repurposing surplus wheat generated during THR production. Though only small batches were produced, the product was showcased at the 2019 BRLPS-supported Saras Mela, where it sold for ₹5-10 per packet, compared to ₹100/kg for THR at the same event. This initiative demonstrated promising potential for product diversification, innovation, and additional revenue streams. The plant currently lacks a structured sourcing strategy, cost model, or scale-up plan for the snack. With formal systems and strategic positioning.



SHG woman getting recognized for their efforts

Challenges & Risks



Scaling Production: Expanding to meet the needs of all eligible beneficiaries requires strategic capacity planning, market outreach, and logistics.

Single-Customer Dependence:

Reliance on ICDS orders limits exposure to end-user feedback and puts the plant at risk of demand fluctuations.

Volatile Wheat Prices: Fluctuations in wheat costs reduce profit margins in certain months.

Diversification Gap: Lack of structured product diversification or cost-benefit analysis inhibits expansion into new food segments.

Business Planning Deficit: Workers lack formal training in business planning or execution.

Opportunities



Women-led Producer Group:

Registering as an official Producer Group under BRLPS can enhance market access, recognition, and resource support.

Sustainable Livelihoods: Model contributes to household income growth, aligning with DAY-NRLM's "Lakhpati Didis" goal (₹1 lakh/year income for SHG members).

Capacity Building: Continued training equips SHG women to become self-reliant and resilient, improving quality and operational autonomy.

Skill Development: Technical knowledge gained by SHG women can transform them into master-trainers, supporting scale-up across Bihar.

Nutritional Service Delivery: Strong demand exists in underserved areas for fortified weaning foods where dietary quality is low—creating social and health impact opportunities.

All in all, the Gaya THR production plant run by local women provided over 35 metric tons of nutritious food every month to 385 Anganwadi Centres. It helped fight malnutrition in the area while also offering steady jobs to women from self-help groups. Managed by the Roushan Jeevika Mahila Gram Sangathan, the plant followed strict quality rules and included both women and men from SHG families in its work. Its success comes from strong community support, help from BRLPS and GAIN-Nidan, regular training, and a smooth supply chain—making it a strong example of how good nutrition and women's empowerment can go hand in hand. The THR production unit acts as a witness to the change that a well-planned government program can bring when put into action. Such smart programs can improve nutrition outcomes, give power to local communities, and create lasting ways for people to earn a living, all helping to build a stronger, healthier India.

References

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3. Hon'ble Supreme Court of India judgement of 2004 related to decentralization of THR production. WP No.196/2001-PUCL Vs. &Ors.
4. The Supplementary Nutrition (under the Integrated Child Development Services Scheme) Rules, 2017 Published vide Notifications No. G.S.R. 149(E), dated 20th February 2017. Supreme Court of India. Writ Petition (Civil) No.196/2001. Supreme Court of India. Civil Appeal No (S).2336 of 2019.
5. FSSAI license



SHG member working in the plant

ROUSHAN JEEVKA
MAHILA GRAM
SANGATHAN
SONAWANWADI

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के सहयोग से स्थापित

वीटामिक्स

रौशन जीविका महिला ग्राम संगठन



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