

Malnutrition Matters

FOOD TECHNOLOGY SOLUTIONS

Micro-Enterprise for Nutrition in Rural Orissa

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A Project Sponsored by Malnutrition Matters
and BISWA (premiere NGO in Orissa)

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With primary funding from the
World Bank Development Marketplace



Project Objective: Achieve a positive health outcome for 15,000 primary school students

- By providing a soymilk-based midday meal
- Meals made locally on a daily basis, with full operational costs paid out of revenue from the government-sponsored midday-meal program
- Majority of capital cost financed by BISWA, local NGO partner
- 18-month health data survey to be conducted with 1400 subjects



Delivery boy ready to go, with soymilk in milk cans: rural Orissa, India

Strategy and Priorities

- Alleviate malnutrition which occurs in at least half of the children in the area
- Ensure long-term sustainability of the project, with no need for donor funds after project initiation
- Provide local employment for over 100 unskilled rural women
- Conduct a bi-monthly physical development survey (height and weight) and record incidence of disease
 - For over 700 beneficiaries and 700 control students



Monarajnan releasing soymilk from cooker into press, Antapali, Orissa, India

Project Framework

- BISWA financing 75% of capital cost of equipment (20 VitaGoats) via loans to SHGs
- Revenue from the government-funded midday-meal program goes to SHGs providing the midday meals
 - Rs. 1.6 per day for 200ml of fortified soymilk (about 4 cents)
- SHGs also sell tofu and okara in the open market for extra income
- SHGs must pay ALL costs including rent, labor, soybeans, sugar, delivery (by bicycle) and loan repayment
- Each VitaGoat can serve 600-800 children per day
- No refrigeration or packaging required



*Women measuring the soaked soybeans before grinding
Bolaranga, Orissa, India*

Project Background

- Soy foods are the lowest cost whole protein source
- Many children receive adequate calories but are still malnourished due to lack of protein and micronutrients
- Midday meal budgets are fixed, around Rs. 2 per day
- SHGs are contributing funds and labor required to prepare the individual sites for the VitaGoat
- Fresh soymilk with sweetener had been proven to be acceptable to children
- VitaGoats are manufactured in India, with additional training centers in South Africa and Benin



*Eating bread with soymilk,
Kankudapali, Orissa*



Challenges

- Creating market for tofu and okara
- Government certification and approval for midday-meal program
- Finding suitable, affordable sites for the VitaGoat
- Finding the right formulation (sweetness, flavoring, micronutrients)
- Accurate measurements in physical development survey

Solutions

- Assistance from MM and BISWA supervisors (community knowledge)
- Government lobbying by BISWA, assistance from local MM subject matter expert
- Community support (parents, SHGs) with assistance from BISWA
- Pilot project, BISWA supervisors, subject matter expert, creativity
- Proper equipment and training of health workers

Sustainability

- First four systems are making a small profit
- Potential challenge is rising soybean prices
- Regular and accurate reporting are essential to spot budding problems (see sample)

Key Factors for Success

- Revenue from midday-meal program
- Financing for equipment
- Strong local partner: community presence and capability

*Village children having their first
drink of soymilk
Bolaranga, Orissa, India –
November, 2007*



Primary school children drinking soymilk from their lunch plates in Antapali, Orissa