

Soy Dairy Micro-Enterprise



National Soybean Research Laboratory

University of Illinois, Urbana-Champaign

1101 W. Peabody Drive

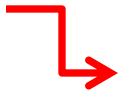
Urbana, IL 61801

www.nsrl.uiuc.edu

University of Illinois at Urbana-Champaign, College of Agricultural, Consumer & Environmental Sciences



National
Soybean
Research
Laboratory



COURTESY: UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Knowledge Transfer

Training: A vital component to the Success of a Soy Dairy Micro-Enterprise.



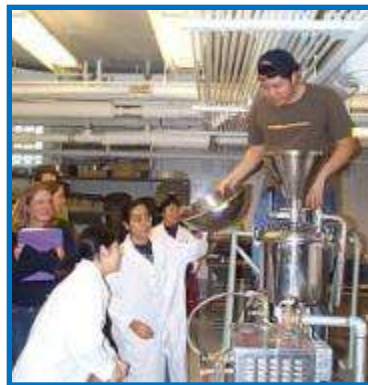
Training areas –

- Installation
- Operation
- Maintenance
- Food safety & quality
- Hygiene
- Recipe & nutrition analysis.



Domestic Training: Pilot Plant and Teaching/Test Kitchen

- Serve as a SoyCow & VitaGoat training center
- Discover innovative applications for soy foods
- Facilitate sensory and consumer product evaluations
- Develop new recipes and products incorporating soy
- Provide expert knowledge on soybean processing



International Training



Hands-on, local training affords the micro-enterprise employee an opportunity to gain a vital understand of the mechanics involved in the installation, maintenance & operation of a SoyCow.



Our training specialists have installed six SoyCows in Central America alone.



Central America



Some of our projects include:

- **CEPUDO**
NGO focusing on education & community development
San Pedro Sula, Honduras
- **Fundaniñas**
Orphanage for at-risk & abused girls – Guatemala City, Guatemala
- **Centro De Artes y Officino**
Vocational training & teaching center – Guatemala City, Guatemala
- **AsociacionObraSociales del Hermano Pedro**
Free Hospital, Clinic & Orphanage – Antigua, Guatemala



NSRL/UIUC Efforts

- ACE 199 CAB - 17 business students
- Short-term Study Abroad in Guatemala
- January 2010
- Business Plan Development



Case Study: Fundaniñas

The SoyCow

- Donated and installed in September 2009
- Provides soymilk and soy-based food products to the girls

Opportunities

- Expand production
- Market to area orphanages and daycares

Challenges

- New operation
- Limited staff with required technical training



Case Study: Centro de Artes



Organization

- Cooking, sewing, art, cosmetology, computers, and other trades

The SoyCow

- Sell 100L each month to local priest for area children
- Produce milk 3 times/week
- Donated and installed in 2008

Opportunities

- Can market to large student body & incorporate into curriculum
- Could serve as the technical training center for all SoyCows in Guatemala



Challenges

- Pricing scheme does not account for cost of soybeans
- Education backgrounds, not business

Case Study: CECYPSA

Privately funded Catholic school located in Retalhuleu, Guatemala. CECYPSA provides housing and education for up to 160 students

The SoyCow

- Produce milk 2-3 times/week
- Sell 75% of milk produced, use 25% onsite
- Use 100% of okara in meals for students and staff

Opportunities

- Well developed business plan
- Experience and success with advertising
- Identified a local supplier of soybeans
- Expand sales area to 10 surrounding communities



Business Plan

Each organization has its own unique situation.

Broad recommendations:

- Record-keeping system
 - Cost accounting
 - Inform pricing decisions
 - Track inventories
 - Evaluate opportunities (expansion, marketing, etc.)
- Communication and cooperation
 - Development of a website to allow SoyCow operations to communicate needs and experiences with each other
- Need for *basic* business training is critical
 - Suggested to be a component of future aid packages



Beyond Soy Milk



Okara is the solid residue that remains after the soymilk has been poured off – a high fiber, nutrient rich food with many uses.

- Baked goods
- Soups, stews and sauces
- Spreads and dips
- Meat extender & replacer
- 1 Cup Okara contains:
 - 94 calories
 - 4 g protein
 - 15 g carbohydrate
 - 2 g fat (0.2 g saturated)
 - 5.0 g dietary fiber
 - 98 mg calcium

•Cheese Balls

- 2 cups okara, well squeezed
- 200 g shredded mozzarella cheese
- 1 egg white
- 2 Tbsp corn starch
- salt to taste
- oil to fry
- In a small bowl, beat the egg white until stiff.
- Mix well all ingredients together. If the dough is too soft, add additional corn starch.
- Shape into 1" balls .
- Heat oil in a deep sauce pan or fryer to 375 degrees. Fry balls 3-4 at a time in hot oil, turning to brown all sides, until golden brown.
- Remove from oil, and drain. Serve hot



Vietnam

- NSRL/WISHH/U.S.-Vietnam Foundation collaboration
- FaifoSoy, micro-enterprise in Da Nang, Vietnam.
- Soy milk, tofu and baked goods utilizing okara (soy milk by product)
- Retail sale and donation to community
- Second branch of FaifoSoy to open on nearby Cham Island



FaifoSoy: One Year Later

- Subsidized contracts with 13 schools in Da Nang area to supply soy milk & soy baked products (total of 4,061 children)
- FaifoSoy donated product to children at six schools in 2009.
- USVNF has purchased product from FaifoSoy for donation to an additional 270 children.
- 55% of FaifoSoy employees are women from economically marginalized families in rural areas.



FaifoSoy: Cham Island

- Second micro-enterprise branch
- Cham Island – protected coral reef surrounding island
- Market: Tourists, retail shops, restaurants
- Donated product to community
- Solar Ovens
- Knowledge Transfer –
DaNang → Cham Island



Thank You!



National Soybean Research Laboratory

*Research, Outreach and
Education supporting
soybean production and
nutrition*