

Food Packaging: SEWA Rudi Project Assessment in Gujarat, India

Comprehensive Initiative on Technology Evaluation at MIT
December 2017



Sudhaben Maheshbhai Solanki
displaying a 1 kg packet of turmeric
powder sold by SEWA RUDI



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This report was produced by the Comprehensive Initiative on Technology Evaluation at the Massachusetts Institute of Technology and made possible through support of the United States Agency for International Development. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the United States Agency for International Development or the US Government.

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INTRODUCTION

The Comprehensive Initiative on Technology Evaluation (CITE) at MIT is dedicated to developing methods for product evaluation in global development. CITE is led by an interdisciplinary team at MIT, and draws upon diverse expertise to evaluate products and develop a deep understanding of what makes different products successful in emerging markets. Our evaluations provide evidence for data-driven decision-making by development workers, donors, manufacturers, suppliers, and consumers themselves.

The Self-Employed Women's Association (SEWA) is the world's first union of informal workers started in 1972. The organization aims to provide work security, income security, food security, and social security (meaning at least housing, childcare, and healthcare) for its two million members across India. SEWA focuses on full employment and self-reliance for its members, and undertakes traditional union activities like policy advocacy, in addition to spinning off other organizations which provide a variety of services, capacity building opportunities, and employment generation.

The Rudi Multi-Trading Company (RUDI) is an initiative by SEWA started in 2007 that aims to connect rural producer groups with new technology for farming, post-harvest processing, warehousing, and marketing of agro-commodities like grains and spices. The organization markets its products at a retail level through a well-known retail outlet called Star Bazaar as well as through a network of women micro-entrepreneurs who sell locally within their own villages. These women entrepreneurs are referred to by SEWA as "RUDIbens."

Because CITE had partnered with SEWA on previous evaluations, including on solar pumps, and has also recently published a report on Food Aid Packaging (see <http://cite.mit.edu>), SEWA requested that CITE look specifically at evaluating technology options for food packaging for the RUDI organization to reduce food spoilage. In the current scenario, RUDI purchases a 3-6 month supply of agro-commodities during the harvest season for sale during that period. After this initial stock is depleted, for most products, the organization buys commodities on the open market or from the local mill for a much higher price.

Solving the food storage problem would have two results – first, RUDI's business model would become more sustainable with a stronger bottom line because they would be able to purchase stock at a low price during harvest season, and second, the rural farmer producer groups would be able to sell more of their products if they were able to supply RUDI with stock to last the entire year.

WHY FOOD PACKAGING?

Food waste is a global problem with dire consequences. According to the Food and Agriculture Organisation (FAO) more than 1.3 billion tonnes of food is wasted globally each year and the total amount of water used to produce the wasted food is 250,000 m³. This is enough to fill 100 Olympic size

swimming pools. The total economic cost of this wasted food globally (excluding fish and seafood) is \$750 billion.¹

The problem in India is especially troubling because 30% of India's 1.3 billion people live below the World Bank poverty line of \$1.90/day² and 194.6 million people are undernourished.³ By addressing the food wastage problem, particularly at the production and processing end, where most of the spoilage is happening, economic gains, carbon emissions reductions, and water conservation can all be achieved.

The importance to RUDI of protecting against spoilage goes further than simply a desire to reduce food waste. At the moment, RUDI only procures goods during the harvest season for 3-6 months to avoid wastage. After those stocks have been depleted, RUDI buys from the open market at a much higher price. By creating a strategy for storing grains and spices for the whole year, RUDI would greatly reduce their cost of goods sold and make their bottom line significantly more profitable, creating financial sustainability and cost-effectiveness of the project.

APPROACH & METHODOLOGY

While past CITE evaluations have stressed the universality of the evaluation results, this assessment sought to solve a specific problem – to reduce spoilage at various points along the value chain. This assessment is different from past CITE evaluations in the extent to which it is driven by the partner. CITE's ultimate goal is to pass along the methodology and learnings from its work so that other organizations can conduct their own evaluations.

In this case, SEWA wanted to work with CITE researchers to evaluate different storage technologies; however, due to resource constraints and other factors, CITE decided to first focus on identifying the points in the SEWA RUDI supply chain where spoilage was occurring. To this end, CITE hired a local researcher (Vandana Pandya) to work directly with the SEWA office in Ahmedabad, Gujarat and coordinate remotely with the rest of the CITE team. Ms. Pandya had previously worked on two CITE evaluations, so she was well suited to conduct the assessment in close contact with SEWA.

During the assessment, findings from interviews were shared with the RUDI Director and clarification and guidance were sought regularly to clear up any potential misunderstandings. Additionally, this provided the SEWA head office with valuable insight into the opinions and ideas of RUDI staff, farmers, and RUDIBens to help them better manage the value chain and work productively.

In the future, SEWA RUDI may decide to test different types of storage technologies in a partner-led evaluation using the CITE methodology, but direct support from CITE would require additional funding. However, CITE is currently developing a Practitioner Guide to help organizations like SEWA adapt the CITE approach to their specific evaluation needs.

¹ FAO. Food wastage: Key facts and figures. <http://www.fao.org/news/story/en/item/196402/icode/>

² <http://www.businesstoday.in/current/economy-politics/india-has-highest-number-of-people-living-below-poverty-line-world-bank/story/238085.html>

³ <http://www.fao.org/3/a-i4646e.pdf>

DEFINING THE PROBLEM

SEWA submitted a concept note to CITE that described the problem that RUDI was facing – specifically addressing spoilage at the bulk level, as well as the perception among RUDIbens that they could not take stock of product for fear that it would spoil before it could be sold to their customers, the end-users. This concept note set the context and objectives for the assessment.

CITE’s first step was to meet with various stakeholders within RUDI’s organizational structure to understand how the business worked. Internal meetings provided information from which a framework was constructed for understanding the processes involved in the business including the movement of the product along the supply chain, the people involved at each level of the supply chain, and how the business was financed and products were paid for at each level. A draft supply chain was developed as a framework to be adapted as further detail was revealed through additional meetings with RUDI staff, field visits to the Processing Center, and interviews with stakeholders like the farmer producers, Processing Center and warehousing staff, and the RUDIbens themselves.

During these internal meetings, we also identified specific questions and a level of detail necessary to create a full understanding of the supply chain and to be able to identify the places along the supply chain that might be causes of spoilage.

STUDY ELEMENTS

Building on learnings from past evaluations, the team focused on gaining deep insights in RUDI’s product supply chain and more general insights into the causes of food spoilage, packaging options and warehousing best practices. As shown in Figure 1, the supply chain analysis focused on four supply chain actors, including the farmers/producers of the spices and grains, the Processing Center, the warehouses/store rooms and the individual women entrepreneurs who distribute RUDI products in rural areas (also known as “RUDIbens.”) RUDI operates in 7 Districts⁴ in Gujarat, and CITE was able to work with 4 Districts on this research.

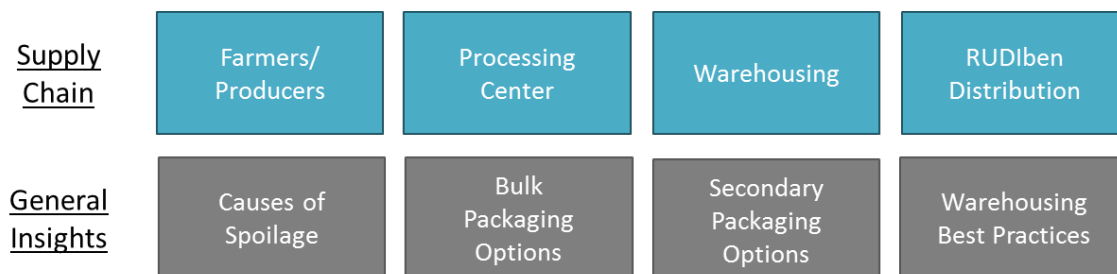


Figure 1: Study Elements

The RUDI study included conversations with SEWA staff at the head office, as well as field visits to interview farmer/producers, processing/warehousing employees, and RUDIben distributors. In all, 26

⁴ The seven districts are: Sabarkantha, Surendranagar, Mehsana, Kheda, Ahmedabad, Gandhinagar, and Chota Udaipur.

individuals were selected through a convenience sampling method and were interviewed through a combination of semi-structured interviews and survey responses. These interviews helped to articulate the supply chain in detail as well as identify the places along the supply chain where spoilage was most likely to occur. In addition to mapping the RUDI supply chain, the team also gathered general data on grain and spice spoilage, packaging options available in India, and warehousing strategies and best practices.

FINDINGS

Three main topics were addressed in the RUDI Study, including the financing flows overall organizational structure, the supply chain and its various actors, and general insights into the organization with a focus on identifying potential areas of concern with regards to food spoilage.

RUDI PRODUCTS

Table 1 shows the products currently sold by RUDI, including their Net Weight and Price in Rupees where available. The products are generally sold in kits containing several products based on local demand.

Name (Gujarati)	Name (English)	Net Wt (gms)	MSRP (rupees)
Ajmo	Ajwain	100	30
Asafoetida	Hing	100	40
Bajri	Pearl Millet	1000	18
Bataka Vefers	potato chips	100	19
Chai	Tea	1000	200
Chana dal	Split Bengal gram	1000	125
Chana Deshi	Whole Bengal gram	1000	115
Chana no lot (Besan)	Bengal gram flour	1000	80
Chhole Chana	Chole Channa	1000	160
Chokha	Rice	200	10
Chokha Gujarat -17	Rice(Variety Gujarat -17)	1000	45
Chokha Kanki	Rice (Tiny pieces)	1000	32
Chokha Khichadiya	Rice (for Khichadi)	1000	80
Chokha Parimal	Rice (Variety Parimal)	1000	35
Dhanajiru Powder	Coriander Cumin powder	50	13
Garam Masala	Garam Masala powder	100	25
Ghau	Wheat	1000	30
Gol	Jaggery	1000	50
Haldi powder	Turmeric Powder	50	10
Jira	Cumin	50	11

Name (Gujarati)	Name (English)	Net Wt (gms)	MSRP (rupees)
Khand	Sugar	1000	45
Khava nu Tel	Edible oil	1000	80
Mamra (Murmura)	Puffed rice	1000	40
Marcha powder	Chilli Powder	50	13
Masoor Dal	Split Red Lentil	1000	60
Math	Vigna aconitifolia	1000	80
Mendo	Maida flour	1000	25
Methi	Fenugreek	50	4
Mithu	Salt	1000	5
Mug	Mungbean (Whole green)	250	23
Mug Dal	Split mung beans (Split green)	200	21
Mung Mogar Dal	Split mung beans without husk	200	24
Poha	Rice Flakes	1000	44
Rai	Mustard	50	5
Ravo (Sooji)	Bengal gram flour	1000	42
Sabudana Papad	Sago	100	19
Sambar Masala	Sambar powder	100	35
Shing	Ground nut	100	12
Tal	Sesame	100	15
Tuvar Dal	Split pigeon pea	1000	145
Tuver Dal	Pigeon pea	200	30
Udad	Whole black bean	1000	70
Udad Dal	Split black bean	1000	160
Vatana	Green peas	1000	80

Table 1: RUDI Products

RUDI FINANCING AND SALES MODEL

As shown in Figure 2, there are several SEWA affiliate organizations involved in the RUDI financing model. In order to form a new Processing Center, startup funds are requested from the SEWA Gram Mahila Haat affiliate via the District Association and RUDI Multi Trading Company. SEWA Gram Mahila Haat was formed in 1999 to provide marketing and technical services to rural producers and they receive funding from the Government of Gujarat to support village based producer groups.

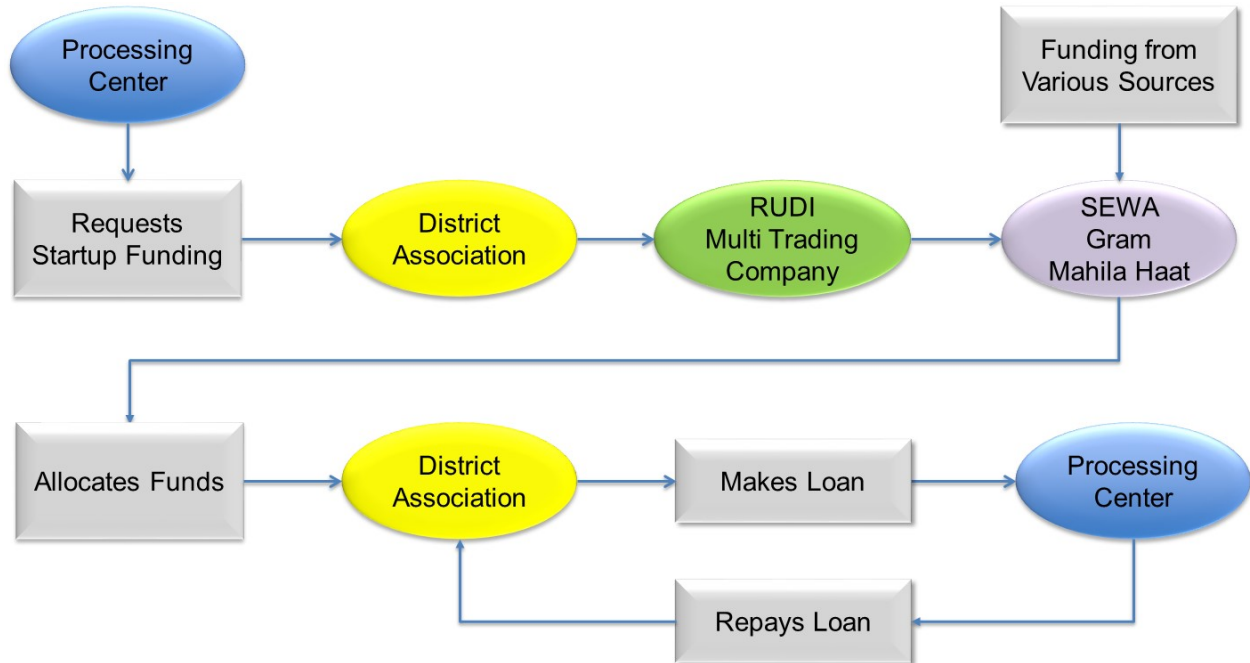


Figure 2: RUDI Financing Model

The goal of the Processing Center is to become self-supporting as soon as possible; however, they generally need 2-3 loans from SEWA Gram Mahila Haat before it starts functioning independently. The Processing Center repays the first loan before applying for a new loan. SEWA Gram Mahila Haat processes the funding for the District Association and they in turn send it to the Processing Center where it is used for the procurement of the raw material, processing of products and preparing finished goods.

The Processing Center sells finished goods to the Distribution Center, RUDI Multi Trading Company and Star Bazaar, as shown in Figure 3. RUDIbens buy products either directly from the Distribution Center or through a facilitator referred to as the “Agewanben” and then sell them to the village level consumers. Payment from the RUDIbens is required at the time of purchase through a deposit into SEWA’s bank account.

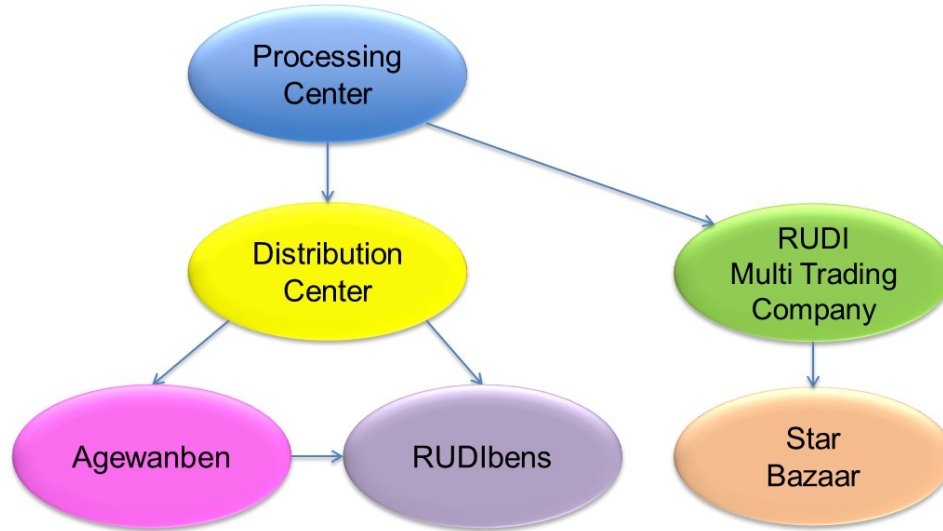


Figure 3: RUDI Sales Channels

RUDI SUPPLY CHAIN

Depending on the source of the pulses and spices and also whether the product needs to be milled, products arrive at the Processing Center through three channels – either through the mill, directly from farmers or through the District Association Office. Figure 4 shows the movement of products through the RUDI supply chain for a single District. According to SEWA, 90% of the goods produced by RUDI are sold through the RUDIbens, with another 2% sold to retail stores (Star Bazaar), and 8% sold from the Processing Center to local residential communities through the RUDI Multi Trading Company.

The CITE team spent half a day at the Processing Center meeting with the District Association person in charge, the person in charge of RUDI for that Processing Center, and the manager of the Processing Center workers. Another half day was spent meeting with the farmer producers and the RUDIbens. Surveys were developed for each respondent group and are available in the Appendix. This same interview pattern was used at the other three Processing Centers that were visited. The interview responses were collected and collated to check for consistency between Processing Centers. Each of the Supply Chain actors are described in detail below.

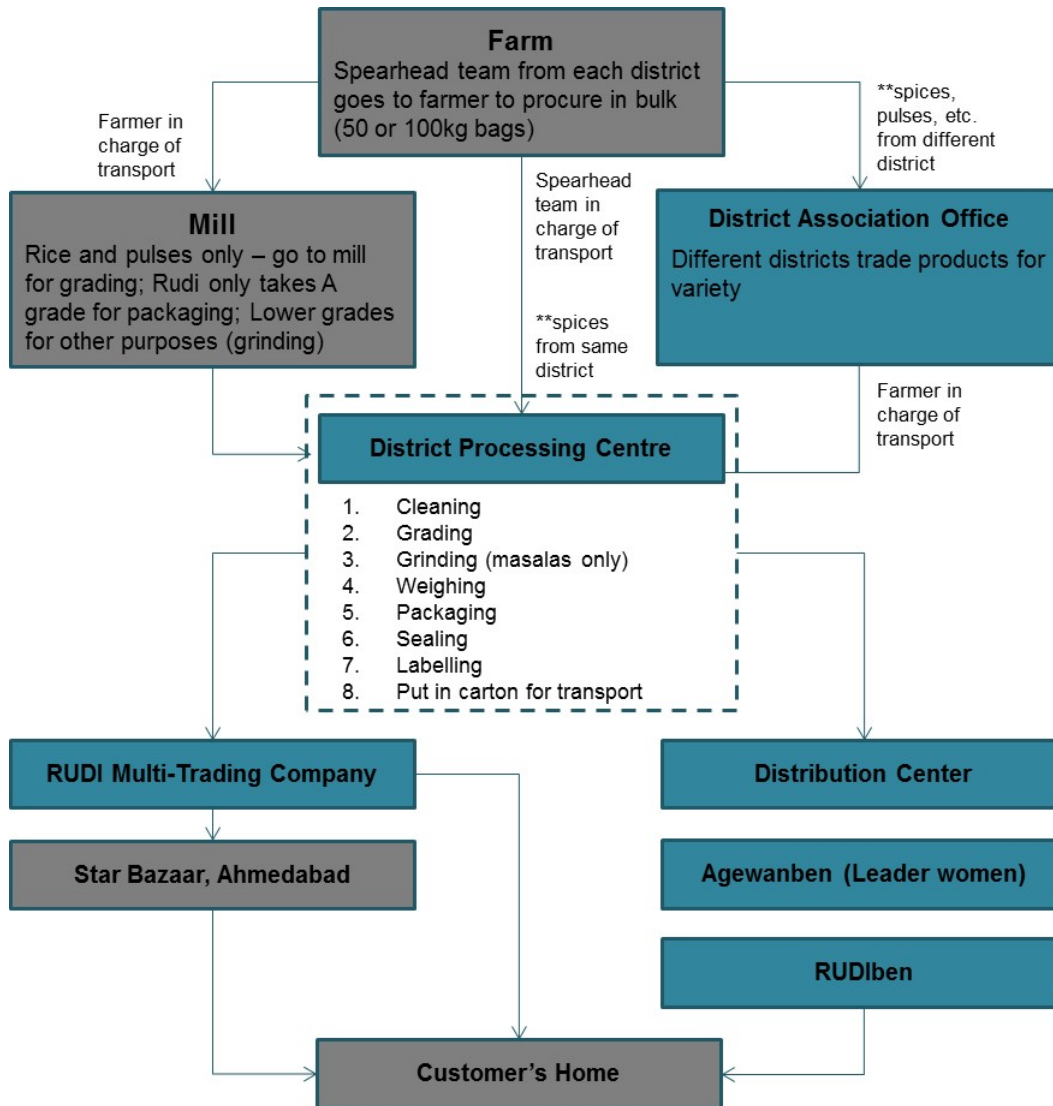


Figure 4: Product Movement Through RUDI for a Single District

FARMERS/PRODUCERS

The farmers/agro-product producers are often SEWA members themselves, but are not part of the RUDI organization. The spearhead member of the District RUDI team visits the farmers and procures directly from them in 50-100kg bulk bags. In all, RUDI procures staples and spices worth more than INR 40 million (\$615,500) from 3,000 farmers. An additional INR 10 million (\$154,000) is procured from the open market to meet demand during the off season. All products go directly to the Processing Center for processing and packaging, except for rice, which is ground at the mill first.

Farmers interview data						
	Village	Block	District	Age	Gender	Education
1	Juna Amrapar	Halvad	Surendranagar	35	Female	Middle (Course 6 to 9)
2	Juna Amrapar	Halvad	Surendranagar	47	Male	Higher Secondary Course
3	Juna Amrapar	Halvad	Surendranagar	40	Female	Primary or below
4	Meda Adraj	Kadi	Mehsana	38	Male	Middle (Course 6 to 9)
5	Meda Adraj	Kadi	Mehsana	48	Male	Higher Secondary Course
6	Bamroli	Vaso	Kheda	31	Female	Middle (Course 6 to 9)
7	Lingda	Umreth	Anand	53	Male	Diploma, graduate, above
8	Lingda	Umreth	Anand	59	Male	Higher Secondary Course
9	Ardi	Umreth	Anand	48	Female	Primary or below
10	Parpotiya	Malpur	Aravali	40	Male	Middle (Course 6 to 9)
11	Fatepura	Malpur	Aravali	45	Male	Middle (Course 6 to 9)
12	Vadinath	Malpur	Aravali	35	Male	Illiterate no formal school

Table 2: Farmer Demographics



Figure 5: Farmers in Mehasana District

MILLS

The farmers bring rice to privately operated mills in the area for grading. The Processing Center buys only Grade A rice to package for retail sales; however, lower grades may be procured and ground for other uses, including flour. shows a typical mill in Mehasana District.



Figure 6: Rice Mill near Meda Adraj village in Mehasana District in north Gujarat

DISTRICT ASSOCIATION

District Associations procure the produce from the producer groups and process it at the Processing Center, which is owned and run by the District Association. The District Association also manages the sale purchase contracts which set the quality, quantity and price of the product. The District Association management is in place to improve the efficiency of the Processing Center, with the assumption being that if the Processing Center can purchase products at a predetermined price they can maximize their profit by reducing the cost of procurement and processing.

PROCESSING CENTERS

SEWA has established one Processing Center in each District. Goods are procured from farmers and kept in warehouse (Small room) at the Processing Center. Activities like cleaning, grading, grinding, weighing, packaging and labeling for retail sales take place at the Processing Center. Generally, there are more than 50 women working at each Center.

The CITE team first visited the Anand District Processing Center in Pij, Gujarat State with RUDI Head office staff, including Uma Swaminathan who is the Managing Director of RUDI Multi-trading Co. Ltd. Umaben was on hand to make introductions and ensure that CITE had full access to the warehouse, storage space, and processing unit in its entirety. Similar visits were made to three other Processing

Centers as well. The demographic data for the interviews conducted with RUDI Processing Center managers is shown in Table 3 and processing activities are shown in Figure 7.

Processing center interview data (Person in charge)						
	Processing center	Block	District	Age	Gender	Education
1	Pij	Nadiyad	Kheda	50	F	Diploma, graduate, above
2	Nandasan	Kadi	Mehsana	38	F	Diploma, graduate, above
3	Aniyor	Malsar	Aravali	36	F	Diploma, graduate, above
4	Dhangadhra	Dhangadhra	Surendranagar	39	F	Diploma, graduate, above

Table 3: Demographic Data for the Processing Center Managers



Figure 7: CITE Study Lead Vandana Pandya (center) with Processing Center Employees

Many different activities take place at the Processing Centers, as shown in Figure 8. In addition to the overall management group at the Processing Center, there are five additional groups including those focused on Raw Materials, Quality Control, Processing Operations, Marketing and Accounts.

Roles and Responsibilities at the Processing Center

1. Role of the Processing Center “in charge”

- Monitoring over all act like raw material
- To check quality of delivered raw material
- Monitor processing
- Selling targets
- Keep eye on accounts
- Reporting to district office

2. Role of Raw Material “in charge”

- Acknowledge the quality report from the Processing Center “in charge”
- Proper arrangement of the raw material
- Check weight
- Maintain stock register

3. Role of the Quality Control “in charge”

- Verification of the raw material sample
- Coordination with raw material in charge
- To monitor cleaning process
- Random checking
- Lab testing
- Check raw material should be timely processed
- Dispatch finished goods
- Old goods –new goods
- Monitor regular dispatch

4. Role of Processing “in charge”

- Prepare packets according to market requirement
- Monitoring entire process at the processing center
- Stamping and Barcode
- Making payment to women
- Monitor attendance of processing team
- Material stock register
- Recording wastage at each step
- Store finished goods
- Deal with license, rules, regulations

5. Role of the Marketing “in charge”

- Give material to RUDI ben
- Get requirement from RUDIben
- Prepare delivery receipt for sending goods to other district
- Selling goods
- Maintain stock register (incoming goods- selling and finish goods)
- Give update to accountant how much sold through check and cash

6. Role of Accounts “in charge”

- Making payment for purchasing raw material
- Credit income of finished goods sold
- Monitoring of entire selling process
- Maintaining register of sales and purchase

Figure 8: Roles and Responsibilities at the RUDI Processing Center

WAREHOUSING

The CITE teamed observed many different types of storage and warehousing methods, as shown in Figure 9. Goods are only formally warehoused at (or very near to) the Processing Center. Farmers sell directly from the farm and don't store the goods for long periods before selling them. At the Processing

Center, when the products are packed into retail packaging, they go to the RUDIbens, who keep only a few weeks of stock at a time.



Photos taken by Vandana Pandya

1. In Mehsana in North Gujarat, rice with husk is procured from farmers and kept at the rice mill compound in local gunny bags prior to processing in the rice mill.
2. At the SEWA processing center in Nandasan in north Gujarat, rice is kept in the locally purchased “Miniya” bags before cleaning and packaging. This open storage has led to problems with rodents.
3. Packaging and weighing is performed at the Nandasan Processing Center in North Gujarat.
4. Harvested rice is stored in a house at the producer's farm prior to transport to the rice mill. The RUDIben in the photo is also a rice producer.
5. Finished products are arranged in racks for selling at the Nandasan Processing Center. The open storage has led to rodent issues and sometimes the products must be repackaged due to damage.
6. At the Nandasan Processing Center, finished products are stored prior to distributing to RUDIbens.

Figure 9: RUDI Storage Methods

DISTRIBUTION CENTERS

At the District Distribution Center, goods are generally collected by the Agewanben and brought to the RUDIbens in villages. There can be more than one Distribution Center for a single Processing Center, and up to ~ 35 villages covered under one Distribution Center. Between 5-6 Agewanbens work at each Distribution Center.

The management at the Distribution Center consists of one Administration person and one Accounts person and they work closely with the Processing Center to manage accounts and stock for the RUDIbens. The Distribution Centers are sometimes co-located with the District Association office.

RUDIbENS

The RUDIbENS are responsible for collecting material from the Distribution Center, selling products to village consumers, collecting money from consumers, depositing money back to the Distribution Center and keeping records of all transactions. As shown in Table 4, the CITE team interviewed 11 RUDIbENS from 5 different Districts to get a general feel for the demographic profile, noting that the sample size is too small to be of statistical significance. There are about 500 active RUDIbENS in the area covered.

RUDIben Interview data						
	Village	Block	District	Age	Gender	Education
1	Bamroli	Vaso	Kheda	31	F	Middle (6 to 9 course)
2	Pij	Vaso	Kheda	36	F	Middle (6 to 9 course)
3	Pij	Vaso	Kheda	34	F	Middle (6 to 9 course)
4	Enjar	Dhnagadhra	Surendranagar	30	F	Primary or below
5	Malaniyad	Halvad	Surendranagar	35	F	Middle (6 to 9 course)
6	Meda Adraj	Kadi	Mehsana	35	F	Middle (6 to 9 course)
7	Silli Petapara	Umreth	Anand	28	F	Middle (6 to 9 course)
8	Kalyanpur	Umreth	Anand	48	F	Middle (6 to 9 course)
9	Parpotiya	Malpur	Aravali	35	F	Illiterate No formal school
10	Ardi	Umreth	Anand	50	F	Primary or below
11	Vadinath	Malpur	Aravali	32	F	Primary or below

Table 4: Demographic Data for RUDIbENS

The CITE team also gathered sales data for the 11 RUDIbENS interviewed. As shown in Figure 10, rice is the product with the highest sales rate (shown in kilograms per month), followed by Edible Oil, Split Mung Beans, Wheat, Sugar and Jaggery, which is a natural sweetener made from evaporated sugar cane. For these 11 RUDIbENS, these top 6 products (~ 20% of the total products sold) represent 72% of sales by weight. However, when this data is combined with the price data shown in Table 1, the top products change when looking at the proceeds from sales in rupees/month, as shown in Figure 11. The top 6 products in this case is 68% of the total proceeds per month. Note that the net proceeds does not indicate profit from sales since we do not have information of the cost of production.

Currently, RUDI does not track sales data on a per-product basis since the products are sold together in a kit. However, there are several things that SEWA RUDI could learn if this type of sales data was analyzed for the entire RUDIben population. First, since storage and transportation of heavier products generally costs more than storing and transporting lighter items, if there is a heavy product that brings little in terms of revenue (total sales – total costs), then RUDI should think about eliminating that product from the RUDIben kit. Similarly, if there is a highly profitable product that requires less storage and is easier to transport, maybe RUDI should think about increasing the number of those products.

Another important factor to consider is shelf life and pest control. If the kits are comprised of items with widely varying shelf lives, it is important to track usage rates of the items in the kit to ensure that the products are consumed before they expire. Similarly, if products that are particularly attractive to pests (e.g., sugar and sugar derived products) are bundled with less vulnerable items (e.g., red chili pepper), then the entire kit could become contaminated instead of just losing a specific item.

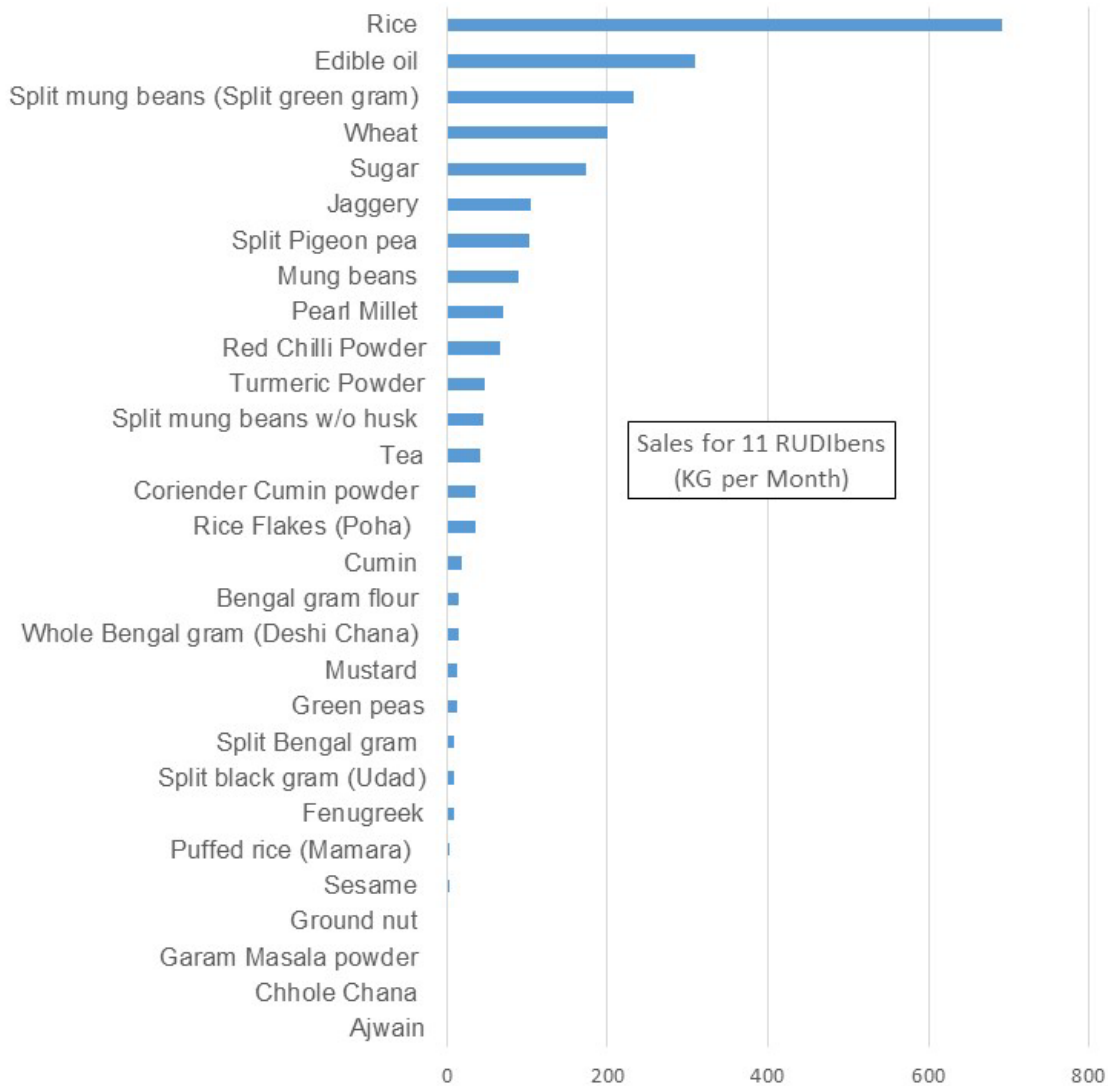


Figure 10: Sales for 11 RUDIbens Interviewed (by KG, left) and (by rupees, right)

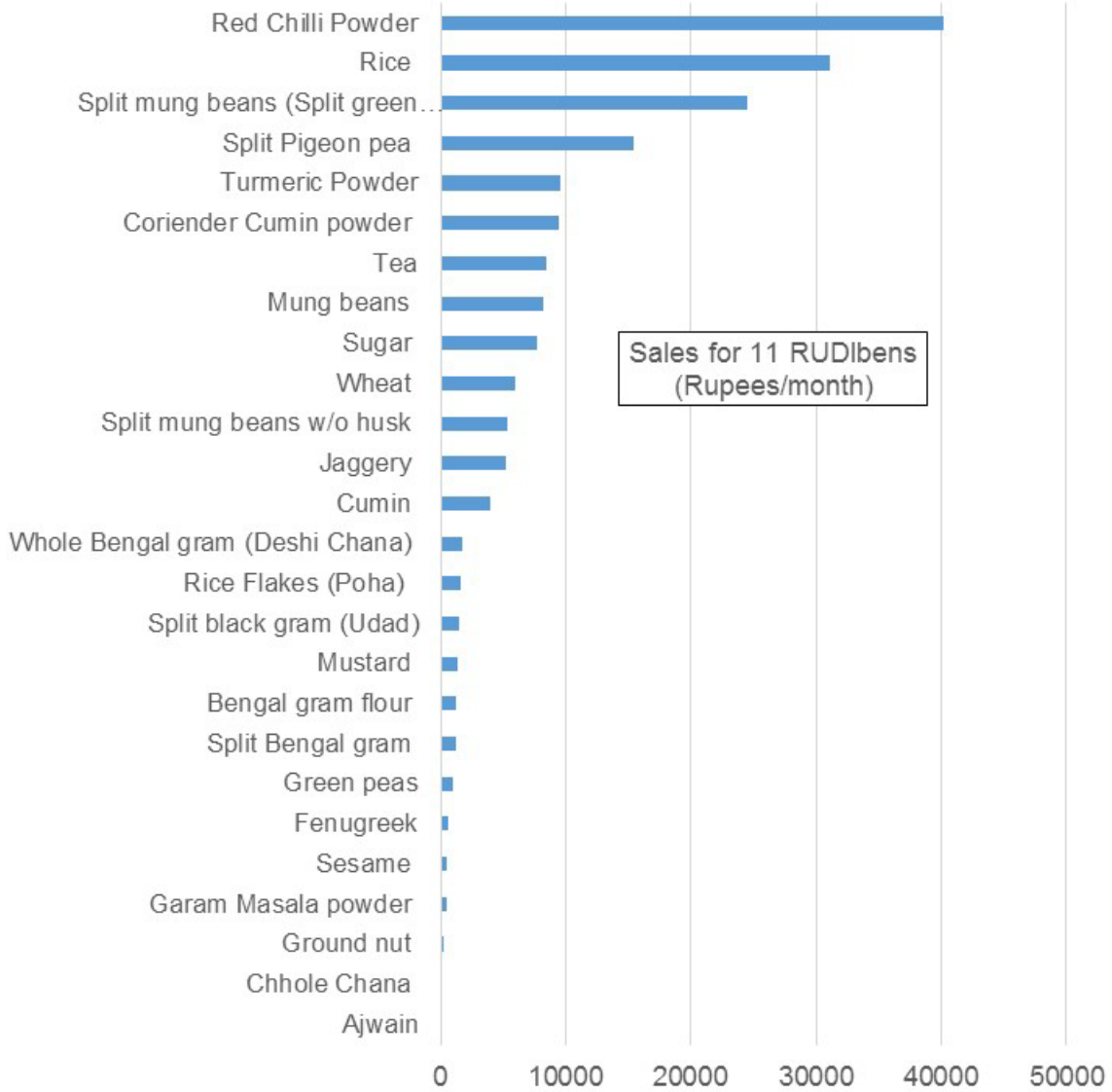


Figure 11: Sales for 11 RUDIbens Interviewed (by rupees)

GENERAL INSIGHTS

During the field work, the CITE team conducted interviews with farmers, Processing Center management staff, and RUDIbens. The notes from these interviews are contained in electronic format (Excel) in the digital Appendix. Some general insights from these interviews are described below.

SPOILAGE AND OTHER QUALITY ISSUES

CITE was given a full list of products sold by RUDI including price and quantity sold. Through interviews, this list was narrowed specifically to pulses including moong dal and chana dal which respondents claimed spoiled the fastest. It is possible that by giving these specific products higher quality packaging (both at bulk and retail levels) as well as greater attention, spoilage could be significantly reduced.

In addition, it was noted that turmeric required additional packaging. While it doesn't spoil, it reacts with the plastic packaging and becomes sticky. This problem was addressed by double lining the retail packaging.

PACKAGING AND STORAGE

The mixture of plastic gunny bags and jute bulk storage bags observed in the field are not procured through a formal channel and are supplied by the local markets. This is where some of the insecticide treated bags could help RUDI reduce the amount of spoilage occurring in certain products. During this time, CITE also visited the packaging company who supplied the retail packets for the products. The CITE teams feels that the spoilage, infestation and other quality issues are occurring at the warehouse level, prior to the products being put in the smaller retail bags.

Storage containers was also a topic of concern. Even while the RUDIbens keep the stock for a few weeks in their homes, they run the risk of spoilage from rodents and insects. A galvanized drum would prevent rodents from accessing the stock; however, care must be taken to insure that the drum used is intended for food storage and not repurposed from other uses (including oil storage). While RUDIbens can't afford the galvanized drum on their own, they suggested a cost-sharing model with RUDI that would allow them to take more stock. However, rodent damage is also an issue for stock stored in the racks and cartons where the RUDIbens keep the finished product before taking it to the customers.

In Sabarkantha, a RUDIben said that a loan for a small shop would allow her to keep more stock and have a storefront where people could come directly to her instead of her having to travel door to door. In Kheda, the RUDIbens noted that lack of easy transport keeps them from stocking more product. If they had a cart or something with wheels, they would be able to carry more at a time. Another RUDIben had the idea to brand and market RUDI products much like Amul markets their dairy products – one single shop selling only the products of that one brand.

RECOMMENDATIONS AND FUTURE WORK

Based on the CITE team’s observations of RUDI operations and interviews with various supply chain actors, the following recommendations are made:

1. RUDI should gather more data on sales of individual products before making investments in improved storage. This would allow them to identify products that bring in the largest profits for the RUDIbens so that the storage investments have the biggest financial impact.
2. RUDI should develop a “best practices” guide for storage of products at the Processing Centers as well as in the RUDIben homes. Several INGOs have pre-existing materials and short courses on this topic and the CITE team could provide contact information and web links for publicly available material.
3. A field test of the different bags used by RUDI as well as insecticide treated bags available in India could be an appropriate study for a MIT summer intern, provided resources are available for both the student and India support, preferably by CITE team member Vandana Pandya who lead the information gathering piece of this study.

AUTHORS AND ACKNOWLEDGEMENTS

This research would not have been possible without the guidance and support of the Self-Employed Women’s Association (SEWA) including Reema Nanavaty and the management and staff of the RUDI project, especially Uma Swaminathan.

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