

2020

PRICING STRATEGY : NEW TO THE WORLD PRODUCT

Malunggay Cupcake

moringa oleifera



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This report on Strategic Pricing for a new to the world product is based on actual qualitative interviews of tea-workers of Assam.

The interviews were conducted in the last week of December 2019 by a team of qualified researchers led by Ravi Soni & Nitya Nand Deepak.

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Disclaimer

This paper claims originality of the data source and methodology adopted for collecting the data and formulating the concept paper. However, the document does not claim that the theory and model to be original. The key interpretations, logical designs, critical approach and interpretations based on derivatives, findings expressed herein are those of the authors and do not necessarily reflect the views of any individual, organization or institution.

The purpose of this note is purely academic and for creating interest in the academic/intellectual community for further research and innovation in the area of Marketing and Pricing Strategies for new to the world products.

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Mulunggay Moringa Cup Cake

Developing & Pricing Strategy for a new to the world Product :

Moringa as a sustainable nutritional complement for tea plantation community in India



BACKGROUND 1.0

A team of researchers form Grus & Grade led by Ravi Soni and accompanied by Nitya Nand Deepak, Ruchika Handa and Shalu Saharan in the last week of December 2019 conducted qualitative research to understand the nutritional aspects of the tea estate workers in Assam India.

Based on this research's preliminary report, a team of Strategies led by Ravi Soni, Juhi Apte and Sunil Patil started exploring some of the solutions for improvement of the nutritional needs of these workers and further opportunities for these food supplements in a global market.

Situation Analysis: Tea Estate workers in India have a life expectancy of 45 years every household has two workers - husband & wife - who earn a daily wage of Rs. 167, paid weekly by the employer. There is a known deficit of three key nutrients in the population segment:

- 1. Low level of Chlorine and Vitamin D due to the tropical weather
- 2. Low level of Vitamin A due to which there is rampant night blindness
- Pregnant women have low haemoglobin levels ~8per cent

These tea plantations are somewhat closed systems where the effect of induced change can be effectively measured to due limited variation in other environmental & socio-economic factors

Based on the socio economic conditions a food substitute is necessary to provide necessary level of nutrition in daily palate.

The introduction of a nutritional substitute has been analysed based on the following factors:

- 1. Present Per-Family income
- 2. Expenditure Basket based on income
- 3. Food and Cultural habits
- 4. Key Influencers who can change the food habits and spending pattern
- 5. Mental Accounting and Strategizing communication strategy to influence purchasing habits
- 6. Launch of new to the world nutritional food substitute and appropriate Pricing Strategy for the same.

We after and analysis of the research report came up with idea that an MULUNGGAY Moringa Biscuits can be launched – a nutritional complement developed specially to cater to the nutritional requirements (w.r.t. deficiencies) of the Tea Estate workers of India. The objective is to develop a Pricing Strategy which allows us to penetrate 80% of the market within 12 months of launch.



1.1 About the project

One of the reputed Global NGO 'The Organization' (Name Changed due to client confidentiality clause), a Swiss-based foundation in collaboration with governments, businesses and civil society, aims to transform food systems so that they deliver more nutritious foods for all people, especially the most vulnerable.

1.11 A Brief Note on the Project Under Implementation



The objective of this research paper is to recommend a pricing strategy for a new to the world product.

The product has been identified as a nutritional food substitute 'Moringa Filled Cake' to the target group 'Tea Estate Workers of Assam.

The said Target Group is a low income population with a food habit which are

very low in nutritional values. On account of the low nutritional food intake, they suffer various ailments and the life expectancy is very low.

The team of researchers from 'Grus & Grade' collected primary data based on qualitative interview of the workers to objectively define the following :

- 1. The present income of each family of the tea estate workers
- 2. The consumption basket and expenditure habits
- 3. The cultural constrains, factors and influencers
- 4. Willingness, constraints and challenges of the population to accept a new nutritional food intake in their daily food basket.
- 5. Design of the new food substitute that can be easily launched, accepted and adopted by the workers family
- 6. Design Pricing strategy so that the product becomes a success
- 7. Design supply chain strategy to make the product available at reasonable cost
- 8. Design communication strategy to push the product and make it a necessity in daily food intake
- 9. Drive communication channels so that the demand is internal (pull based demand)

Based on these research questions and on Key Informers Interviews conducted by a team of researchers of Grus & Grade, the recommendations were as under :

- 1. A Low priced Moringa Filled Cake (Branded as Mulungay Moringa Cup Cake) should be launched.
- 2. A penetration pricing strategy and small packaging strategy with low cost per packet (A penny a day pricing strategy) is recommended.

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- 3. An appropriate communication strategy (Mental Accounting communication Strategy) should be adopted to influence the consumption basket change and food habit behavioural change vis a vis the income of the worker class.
- 4. Key influencers (Male Members and Children) should be the target audience for influencing behavioural change, spending habit change and success of the product launch
- 5. A closed economy based supply chain to be integrated to cater rural economy and increase income for better intake of the nutritional food substitute.

The pricing strategy should focus upon launching the product at an appropriate price to the target segment

The report is based on actual survey in two (Bold) out of the following four tea estate where the 'Organization' has launched an awareness program for tea estate workers to increase their nutritional food intake :

- 1. Nahortoli
- 2. Sealkottee
- 3. Kharjan
- 4. Mokalbari.

The objectives of this part are three-fold:

- 1. Improve awareness and generate a demand for nutritional food;
- 2. Create a sustainable model for access of products when the demand has been generated; and
- 3. Develop an enabling environment for sustainable scaling up of the operation globally

In order to create awareness and generate demand for nutritious food in these areas, the organization launched a number of initiatives as mentioned hereunder:

- Organizing interpersonal Home-based training among tea-workers families
- Cooking Demonstration
- Cooking Competition
- Imparting nutrition education in school
- in the Tea estate
- Introductory Street Play in the garden lines
- Establishing community level demonstration Kitchen Garden
- Fruits Sapling Distribution
- Celebrated Nutrition month
- Quality improvement (QI) Initiative.
- Nutrition Committee





2.0 Tea Garden Community of Assam (TE Workers)

2.1 Assam – The Tea Capital of India

The state of Assam, situated in the northeast of India, has a considerable percentage of its population under the poverty line.

Assam is the largest tea-growing area; contributes to the 50 percent produce of the country's tea. The growth rate of tea production in Assam has gone up to 15.5 percent while that of Assam's tea production has been 22.7 percent in 2011–12. Culture (Religion)

2.2 Geography of Assam – Climate

With the tropical monsoon climate, Assam is temperate (summer max. at 95–100 °F or 35–38 °C and winter min. at 43–46 °F or 6–8 °C) and experiences heavy rainfall and high humidity.

2.3 Culture of Assam – Languages & Religion

Languages

Sadri, Sambalpuri, Saora, Kurmali, Bengali, Kurukh, Gondi, Kui, Kharia, Santhali, and Mundari are spoken among many communities.

Religion

Table 1 Source : Govt. of Assam Website, Religions in Assam

RELIGIONS						
Religion Percentage Sect						
Hinduism	60%	Shaktism, Vaisnavaite				
Sarnaism	25%					
Christianity	15%	Roman Catholics, Baptist, Lutheran				



3.0 Market Reach – Market Analysis & Need for Change

Aimed at formulating hypothesis, substantiating feedback and deriving gap analysis of our research project, a Quantitative Research was conducted to arrive at an in-depth understanding of the market that will enable adoption (behavior change-led), opportunities & need for new product development, and an approach towards pricing.

The core objectives of the research were:

- 1. To analyze the impact of the existing project in operation in the Area.
- 2. To identify gaps in the nutrition interventions of the existing project.
- To formulate further recommendations for developing a nutritional food substitute and determine it's pricing strategy

This research was conducted over a period of ten days in four Tea Estates of Dibrugarh & Jorhat District of Assam.



3.1 Various Stakeholders in Tea Estates

- 1. Tea Estate Management
- 2. Male Workers
- 3. Female Workers
- 4. Children of workers
- 5. Shop Owners (Retail Access Points)
- 6. Doctors/Pharmacists Change Agents
- 7. Teachers & Schools, Aanganwadi workers
- 8. Non-profit support Nutritionists, and Reputed International NGOs

3.2 Research Survey Fact Sheets

The following fact sheet need to be understood before development of Product and setting up its pricing strategies:

- 1. The experiments and research were conducted within Tea Estates which work within a closed eco-system. Thus, impact of external influence is low. (Experimentally more conducive as variance are low due to limited externalities)
- 2. The interviews were conducted with all the stakeholders within the eco-system and random sampling was populated evenly across all the stake-holders This limited the biasness of observations.
- 3. Total Number of interviews conducted were fifty and based on the transcription, a matrix for indexing the effectiveness of awareness program of Gain was assessed. The following observation was noticed



3.2 Average Annual Family Income of the Tea Estate Workers

At least one member of the family works in the tea garden. But in some households, educated members are working in health department or welfare or estate protection or in the factory. Tea garden workers earn Rs. 167 per day and can work for up to 26 days in a month. They get a day off in a week(unpaid), usually a Sunday. Workers are not paid on non-working days. Wages are paid once in 15 days. The payment value received is Rs. 1638 for the fortnight, if the worker has worked without leave. One paid holiday if worker works for 23 days without being absent.



Table 2 Average Earning of Workers in Tea Estate | Source : Findings of Grus & Grade

Warren Tea Estate						
	(In [Days)				
Working days calculated per worker per year		303				
Less - About 25% days lost due to absentism		75				
Effective working days		230				
	(in F	Rupees)				
Wage per day		167				
Total earning of worker in a year	₹	38,410				

Consumers



4.0 Consumption Basket | Food Consumption – Source and Habits

4.1 Grains

Rice

- All households have access to PDS and get 5 kg per Person in a family at a price of Rs.3/Kg (officially). Unofficially at Rs.4 or Rs. 5 per Kg
- All workers get about 15 Kgs of rice per week from the garden at Rs. 0.67 officially (Rs.1.14/Kg unofficially)
- Most households but 3-5 Kg of rice of better variety from market priced between Rs. 23 Rs.27 /Kg.
- Spend on Rice per month for a family of 5 Members. : Rs. 269

Wheat flour is used much lesser than rice. In some tea estates, wheat flour is provided in certain proportion with rice to the workers

- Mostly used for chappatis / paranthas
- White wheat flour (Maida) is purchased in small quantities (½ Kg) to make 'puri' or traditional delicacies

Pulses

- The most commonly consumed pulse is Masoor followed by Arhar.
- There is a higher intake of Bengal grams among those who migrated from Bihar
- Dried Green peas is used to make curry.
- 2 Kg of dal is consumed in a month by a family of 5. Average price of Dal is Rs.70/kg. Total expense on Dal is about Rs.140 per month
- Pulses are purchased from grocery stores in the garden or at the 'bazaar' that occurs once in 15 days.
- Smaller quantities are purchased from neighbourhood stores.
- The most purchased food products are Potato, Onion, Garlic and Chilly
- These are purchased at the 'Bazaar' or in the grocery store.
- Potato consumed in a family is about 5 -10 kg per month. The average price of potato Rs.18-22 per Kg.
- Total spend on potato: Rs. 220

Onion consumed is about 2-3 Kg per month. Available in neighbourhood grocery store or in Bazaar. Total spend per month: Rs. 90

4.2 Cooking Supplements

Cooking oil

- Mustard oil is mostly consumed. 1 1.5 litres consumed in a month. Available in all neighbourhood stores and Bazaar. Total spend on mustard oil Rs. 135 - 150 per month
- Refined oil is used for making specific dishes. About ½ litre is used in a month. Total spend on refined oil is Rs. 40 50 per month.

Spices

- Spices are mostly purchased at the Bazaar
- People usually carry intended value of Rs.50- 70 for spices like turmeric, chilli powder, flannel, mustard seeds, garlic and ginger.
- Small quantities are purchased in neighbourhood stores.
- About Rs. 100-140 spent per month on spices.



4.3 Fresh Produce – Vegetables & Meats

Vegetable / Leafy Green

- Mostly purchased in Bazaar, not many shops / vendors sell vegetables
- Vegetables purchased last for 3-5 days
- Often households grow vegetables and leafy green in premises of home. Moringa leaves and drumsticks are popular delicacies.
- Vegetables bought at a Bazaar for a value up to Rs.100. There is a relatively low consumption of vegetable. Monthly spend is about Rs.200
- Some vegetables like pumpkin are not consumed because of some association of the vegetable with jaundice.

Chicken meat

- Available in bazaar and some shops within the garden area
- It is mostly consumed on weekends, wage day or some festivals
- Priced at Rs.200 220 per Kg of chicken meat
- Monthly spend on chicken meat is about Rs.200

Egg

- Available in grocery stores in the garden and also with retailers in 'bazaar'
- Many households have negative perception of consuming egg. The yellow yolk is often associated to cause for Jaundice
- Eggs are purchased at per unit price of Rs.7. usually buy in units of 3-5 eggs. Monthly spend about Rs.50 -70

4.4 Snacks

Biscuits

- Available in all grocery stores in the garden area. Sold in Bazaar that appears fortnightly.
- Biscuits are purchased in almost all households. A Rs. 10 pack is consumed daily. Some also consume Rs.20 pack size.
- Thus, the estimated budget for biscuits is about Rs.300 400 per month.

4.5 Monthly Expenditure on Food

The average monthly expenditure on food per worker family in these tea estate are tabulated as under:

Table 3 Source : Grus & Grade | Workers Food Spend

Monthly Expenditure on Food					
Food Item	Spends				
Rice	₹	270			
Dal	₹	140			
Cooking oil	₹	150			
Potato	₹	200			
Onion	₹	90			
Vegetables / leafy green	₹	200			
Meat	₹	200			
Spices	₹	140			
Biscuits/snacks	₹	350			
Maggie	₹	25			
Total	₹	1,765			



4.6 Food Preferences



Figure 1 Source : Grus & Grade : Food Preferences

5.0 Supply Chain Access of Food Items

The demand for essential food items is consistent and depends of cultural and socioeconomic factors as well as set practices and palate of the community. We tried to understand the supply chain of the necessary food items in these Tea Estates. In order to understand the supply chain, we first analysed the connectivity of these estates with other parts of the State as well as Country.

5.1 Connectivity

CONNECTIVITY								
Tea Estate	Location	Features of connectivity	Access to	Availability of				
Category			major	access points				
		Wide, all weather						
		metalled road with						
	Up to 2 Km from	frequent and mostly						
	national or state	economical public						
Near	highway	transport	Easy	High and varied				
		Wide, all weather						
		metalled road with						
Up to 2 Km from moderate publi		moderate public transport		High but not				
Distant	district road	frequency but often costly	Costly	varied				
	On panchayat or	Narrow, rickety, fair						
un-notified roads		weather roads with						
	but beyond 2 Km	limited or no public						
Remote	of any major road	transport facility	Unviable	Low				

Table 4 Source : Grus & Grade Survey : Connectivity study for continuous supply



Major purchase (access) points for TE population are:

- 1. Small retail shops within the labour lines and hamlets,
- 2. Fortnightly haats organised within the TE and
- 3. Mobile vendors visiting the labour lines

5.2 Haat Bazar

Majority of the workers and their family purchase their food-stock as well as other essential items from Haat Bazar which assembles once in every fifteen days.



Figure 2 Glimpse of Haat Bazar

6.0 The Product : Mulunggay Cup Cake (Moringa baked cake)

The leaves of the Moringa Oleifera tree are a natural source of energy offering support for the immune system. Nutritional analysis shows that Moringa leaves are very high in protein. The bright green leaves of moringa oleifera (drumstick tree) are a rich source of vitamin A and C that help in strengthening bones. Interestingly, 80 per cent of the production of moringa leaves happens in India, fetching crores of foreign exchange for the country.

Moringa Nutritional Content Protein42% Calcium125% Magnesium61% Potassium41% Iron71% Vitamin A ... 272% Vitamin C22%

The Pricing Strategy

Purchasing Capacity of the Workers in Assam Tea Estate



7.0 Pricing Strategy

Purchasing capacity of the Workers in Tea Estates of Assam

7.1 Details of Average family Income & Expenditure (on food)

	Li	Members)							
Monthly I	ncome Calculations			Monthly	Expenditu	re Calci	ulations		
Total Members			8	Particulars (Unit)	Quantity	Price	(per Unit)	r Unit) Amou	
Number of workers per family (Avg.)			3	Oil (Ltrs.)	6	₹	110	₹	660
				Rice (Kgs)					
Number of Permanent Workers				Subsidized cost, weekly					
(Fixed Wages)			1	purchase	200	₹	10	₹2	,000
				Vegetables					
				(Gross Spends @ Rs.					
				200/week) Weekly					
Number of Daily Wage Workers	s		2	Purchase	4	₹	200	₹	800
				Pulses (Kg)					
Dependents (No income)			6	Weekly Purchase	4	₹	60	₹	240
				Misc. Expenses (per					
				Member)		₹	250	₹2	,000
Total Monthly Household Inco	ome	₹	5,925	Total Monthly Household Expenditure				₹ 5	,700
Family Member Type		Monthl	y Income						
Permanent Workers		₹	3,500						
Daily Wage Workers		₹	8,350						
Dependents (No income)		₹	-						
Daily W	age Calculations								
Wages per day per Worker		₹	167						
Working Days - Type	Working Days - Nos.	Income	•						
		_							
Working Days per Week	6	₹ _	1,002	-					
Avg. Working Days per Month	25	₹ 	4,1/5	-					
Working Months per Year	6	₹	25,050	-					
Yearly In	come Calculations	1		-					
Permanent Workers									
(Fixed Wages)			21,000						
Daily Wage Workers ₹			50,100						
Total Yearly Income			71,100						
Effective Monthly Dispensible Income			5,925						
Effective Monthly Dispensible In	ncome per Family								
Member	icome per ranny	₹	741						
Member			, 11						

Table 5 Average family Income & Expenditure (on food)

The above calculations show that the household savings are marginally low and income is just sufficient for accessing basic survival items.

- The behavioral change initiatives of projects are aimed towards effectively changing the utility basket of monthly purchase and substitute some amount for nutritional products.
- On account of behavioral shift due to awareness program, the maximum affordability that can be enhanced per day per household is maximum in the range of Rs.15-20.





Mathematically, Maximize U (X1...Xn) Subject to the constraint that

$$\sum_{i=1}^{i=n} PiXi \le I$$

Where,

Xi are basket of commodities purchased now and Pi are price of each commodity. I, is the monthly household income.

The present consumption basket includes daily necessities and there is excess consumption of rice as against protein or vitamin supplement food products.

In order to induce a new product so as to bring in a behavioral change in consumption pattern subject to the constraint that total expenditure is within the budgetary or income level.

To induce a behavior change, the communication strategy should be aligned so as to change the utility basket at any time t for a product x to product x1 over a period of time t2. We use Richard Thaler's Mental Accounting approach of Behavioral Economics.

7.2 Mental Accounting Calculation for Behaviour Change

According to Thaler, people think of value in relative rather than absolute terms. They derive pleasure not just from an object's value, but also the quality of the deal – its transaction utility (Thaler, 1985). In addition, humans often fail to fully consider opportunity costs (tradeoffs) and are susceptible to the sunk cost fallacy.

Family set Monthly		Existing Consumption	Proposed Consumption Basket
considered	Income	Basket	
Medium	4300	Rice @ 40 KG / week:	Rice @ 30 KG/Week Rs.1200/ month
family holding		Rs.1600/month	
(5 members)		Oil @ 3 KG / month	Oil @ 2 KG / Month
		Rs.330/month	Rs.220/month
		Vegetables Rs.600/month	Vegetables Rs.800/month
		Pulses @ 1 KG/week Rs.240	Pulses @ 1.5 KG/week Rs.360
		School Fee + Misc.Rs.1000	School Fee + Misc.Rs.1000
			Nutri Cookies
			@ 15 /day
			Rs.450
		Rs.3770	4030

Explanation of the principle through example:

Table 6 Source Grus & Grade Survey Mental Accounting



This the existing Consumption Basket < I Proposed Consumption Basket < I

With the right communication and marketing strategies induced behavior change to invoke value change in purchasing behavior. The proposed marketing channel need to create value for need of protein and iron supplements as part of the dietary habit.

8.0 Mapping of Mental Arithmetic

8.1 Pennies-a-day & Prospect Theory – Background for Analysing the Mental Arithmetic

The current projects interventions did not account for the weekly dispensable income of daily wage workers, resulting in little to no adoption of the Fortified Oil introduced as a nutritional complement (Vitamin D). Only one SKU of 1 litre was launched, at a price of Rs. 110/litre. We studied Pennies-a-day Pricing and Prospect Theory to arrive at two SKUs:

- 1. Travel Pack for Children 50 gms to be carried by children to school
- 2. Travel Pack for Adults 75 gms pack to be carried workers to the Tea Estates
- 3. Family Pack 100 gms to be positioned as breakfast tea-biscuits to inculcate a habit for the entire family

"Pennies-a-day" pricing is where the price is described on a per-day basis, changes the temporal frame and can boost the demand for a good or service that is consumed over time (Gourville, 1998).

The communication strategy and supply chain environment induced by GAIN for workers in Tea Estate had one value proposition to supplement Vitamin D through supply of Fortified Oil.

While conducting the research for Behavior Change it appeared that most of the household consumed Non-Fortified Mustard Oil

- Price of Non-Fortified Mustard Oil and monthly consumption @ 3 liter
- Total monthly expense on Mustard Oil = Rs.330/ liter

The workers earn @ 167/day for 6 days and get weekly salary = Rs.1000/ week

The workers purchase Mustard Oil @ 0.50 liter per 6 days = Rs.55/ 6 days Monthly Expense = Rs.330

Fortified Oil is available only in 1-liter pack @ 130 per liter



The workers make small expenses per week as against full expense on monthly basis. As per the mental accounting principles, the losses when aggregated has lesser impact as against the disintegrated losses.

Thus, most of the families were not ready to purchase +F @ 130 per liter and preferred non fortified oil @ 55 /0.5 liter pack. But when explained that the total monthly, additional expense that they have to incur will be incremental Rs.60 only, the workers were ready to buy + Oil

Utility Theory using Lagrange's multiplier is defied hereunder:

 $\mathsf{Max}\: \mathsf{U}(z) - \lambda(\sum \mathrm{pizi} - I)$

8.2 Prospect Theory | Effect of the Mental Accounting Value Function

The prospect theory is an economics theory developed by Daniel Kahneman and Amos TveRs.ky in 1979. It challenges the expected utility theory, developed by John von Neumann and Oskar Morgenstern in 1944, and earned Daniel Kahneman the Nobel Memorial Prize in Economics in 2002. It is the founding theory of behavioural economics and of behavioural finance and constitutes one of the fiRs.t economic theories built using experimental methods.

Based on results from controlled studies, it describes how individuals assess in an asymmetric manner their loss and gain perspectives. For example, for some individuals, the pain from losing \$1,000 could only be compensated by the pleasure of earning \$2,000. Thus, contrary to the expected utility theory, which models the decision that perfectly rational agents would make, the prospect theory aims to describe the actual behaviour of people.

In the original formulation of the theory, the term prospect referred to the predictable results of a lottery. However, the prospect theory can also be applied to the prediction of other forms of behaviours and decisions.

8.3 Defining the Value Function

A positive response was noted when the cost & expenditure structure of the Fortified Oil was changed for the purposes of mental accounting. This verified the Prospect Theory of mental accounting value function proposed by Kahneman & Tversky with states as under:

1. The function V(.) is defined

In order to convert utility function with the value function towards behavior-based theory of consumer choice,

1. Utility function U(x) is replaced with the value function v(.) from the prospect theory.



The value function is defined over perceived gain or loss relative to some natural reference point, rather than wealth or consumption in natural rational theory.

The value function is assumed to be concave for gain and convex for loss (V"(x) <0, x>0 ; V"(x)>0, x<0)

8.4 First rationale for assumption of Maximum pricing range for Moringa Biscuits

Thus, to induce the behavior shift in consumption basket, the mental accounting principles need to be kept into consideration. The packaging and pricing of our new product 'Cookies' needs to be such that the poor workers value the product, does not affect too much of a mental loss vis a vis their income and monthly expense.

The principles of Prospect Theory indicate that individuals will **segregate gains** and **integrate losses** because the value function exhibits diminishing sensitivity as the magnitude of a gain or a loss becomes greater.

We have thus considered the maximum amount a family would spend per day for cookies will be less than Rs.15.



8.5 Segregation of Gain and Integration of Losses



9.0 Market Analysis for Product Launch

Based on the initial investigation of the market the following need matrix was designed:



9.1 Sourcing and Value Creation | Branding

Successful value creation needs successful value delivery. We need to have a holistic value network



cus our immediate suppliers, distributors, and customers, we will be examining the whole supply chain that links raw materials, components, and manufactured goods and shows how they move toward the final consumers.



We will try to source the raw material locally for making cookies. We can help the locals to start their small workshop or get them all under one roof as in "laghu udyog". By doing this we will be providing them employment and also their conviction in the product will be very much. They can be our brand ambassador. By doing this we have tried to lower the input cost.

We will have merchants who will sell these cookies via Nutri Shops. We can engage older population in establishing these Nutri Shop. This will help in getting employment at fag end of their life. The commitment is also high as the product is made locally by them and sold via their own channels.

We have to go for a pull strategy as this cookie is high involvement product. The locals understand that it is made from local source by them and channelized via them. We will have to do small engagement activities so that to get a better brand recall.

10.0 Marketing Flow in the Marketing Funnel

Physical flow

Supplier \rightarrow Transporter/Warehouse \rightarrow Our Company \rightarrow Transporter/Warehouse \rightarrow Nutri Shops \rightarrow Consumers.

Title flow

Supplier \rightarrow Our Company \rightarrow Nutri Shops \rightarrow Consumers

Payment flow

Supplier \rightarrow Bank \rightarrow Our Company \rightarrow Bank \rightarrow Nutri Shops \rightarrow Consumers

(Actually, the flow is opposite)

Informational flow

Supplier \rightarrow Transporter/Warehouse \rightarrow Our Company \rightarrow Transporter/Warehouse \rightarrow Nutri Shops \rightarrow Consumers

(Actually, the flow is both side)

Advertisement flow

Our Company \rightarrow Nutri Shops and Consumers.

Since we have a budget constraint, we have to have zero level marketing or direct marketing. The workers our factories can help us to have a talk about products. We will still have direct sales representative whose jobs will to meet and educate consumers, Nutri shops and other shop owners.

We will be going for an intensive distribution as we wish to place our cookies in as many outlets as possible. This strategy will work as our product will bought frequently and at various location.



11.0 Adopting Pricing Strategy

Customer		Objective of Firm		
Characteristic	Vary price among	Exploit Competitive	Balance Pricing Over	
	segments	Position	Product Line	
Some have high search	Random Discounting	Price Signaling (PS)	Image Pricing (IP)	
cost	(RD)			
Some have low	Periodic Discounting	Penetration pricing	Price bundling	
reservation price	(PD)	Experience curve	Premium Pricing	
		pricing (PP/ECP)	(PB/PrP)	
All have special	Second market	Geographic Pricing	Complementary	
transaction costs	discounting (SMD)	(GP)	Pricing (CP)	

Table 7Source Grus & Grade Adopting Pricing Strategy

11.1 Mapping the Customer Segment with Pricing Strategy

Criteria	Differe	ential		Competitive	Competitive Pricing			Product Line Pricing		
Characteristic of Pricing strategy: Low Reservation Price :	SMD	PD	RD	PP/ECP	PS	GP	PB	PrP	СР	
Impact	Yes	No	No	Yes	Yes	Yes	No	No	No	
Competitor in market	No	No	No	Yes	Yes	Yes	No	No	No	
Product Mix	No	No	No	No	No	No	No	No	No	
Characteristic of consumer	No	No	No	Low Reservation Price/Price Sensitivity is high	Yes	Yes	No	No	No	
Product & Cost Characteristic	No	No	No	Economies of Scale & Experience	yes	Yes	No	No	No	
Variants				Limit Pricing						
Relevant legal constraint				Predatory pricing is illegal						

Table 8 Source Grus & Grade Mapping Customer Segment with Pricing Stratey

Hence Pricing Strategy Adopted is Competitive Pricing and target characteristic will be penetration pricing and over a period of time experience curve pricing for scaling up.



12.0 Competitive Pricing Mathematical Modelling

12.1 A: Penetration Pricing Economies of Scale

Economies of Scale = Decline in Average total costs with scale

= Total Cost for Production of x units/number of units produced diminishes

= (FC+VC (n units))/n units = reduces as n increases

Experience curve or experience economies = decline in average total cost in constant dollar with cumulative volume

Economies of Scale is calculated by $\frac{C2}{C1} = \left(\frac{V2}{V1}\right)^{Es}$, $V2 \neq V1$

- C1 = average cost at volume V1
- C2 = average cost at volume V2
- V1 hold for n1 period
- V2 hold for n2 period
- Es = Elasticity of scale

In our present context, since the product is new we initiate the economies of scale and with experience the margin can further shoot up.

Rough Mathematics

Let Fixed Cost for total capacity of 100 unit plant is Rs.10, Variable Cost per unit of Production is Rs.1

Initially 20 units are produced at time t1 : At time t2 80 units are produced

Then, the calculation is as under

1.5/1.125 = (80/20)^Es

Es = (1.33)^0.25

= 1.079

Thus elasticity of Scope is 1.079 which implies that for every additional unit produced the cost is reduced exponentially by 1.079 thus bringing in operational efficacy and profit.



Economies of experience by elasticity of Experience Ee

$$\frac{C2}{C1} = \left\{ \frac{\sum_{j=1}^{n_2} V2j + \sum_{i=1}^{n_1} V1i}{\sum_{i=1}^{n_1} V1i} \right\}^{Ee} \\ = \left(\frac{N2V2 + N1V1}{N1V1} \right)^{Ee} \\ = \left(1 + \frac{N2V2}{N1V1} \right)^{Ee}$$

In our previous example if N2 is 2 and N1 is 1

Ee = 1.0319

Thus the elasticity of experience reduces the price exponentially at 10319 with the increase in volume over a period of time.







12.2 Cost – Plus Pricing

Cost of Production	Pr /K(rice G	Weight needed per KG of Cookies	Product Cost Per KG of Cookie Produced
Cost of RM (Maida)	₹	80.00	0.5	₹ 40.00
Cost of Suger (per	₹	40.00	0.2	₹ 8.00
Moringa	₹	40.00	0.05	₹ 2.00
Pea Nuts	₹	100.00	0.05	₹ 5.00
Other Overhead				₹ 10.00
Manufacturing Cost				K 10.00
Total Manufacturing Cost / KG				₹ 65.00
Fixed Cost for Bakery Unit				₹ 50,000.00
Production Capacity / day				10 KG
Mfg cost Incurred Per Day				₹ 650.00
Selling, Distribution & Administrative Cost per day				₹ 100.00
Total Variable Cost				₹ 750.00
Mark UP over CP	₹	0.20		₹ 150.00
Selling Price Per KG				₹ 900.00
Selling Price Per 50 gm Pack				₹ 4.50
Selling Price per 75 gm Pack				₹ 6.75
Selling Price per 100 gm Pack				₹ 9.00

Table 9 Source Grus & Grade Cost Plus Pricing Calculation



12.3 Value Based Pricing

Value Based Price		
Cost of Existing Product of similar utility		
Cost of 100 gm Parle G Biscuit	₹	8.00
Differention Value Created / Protien & Iron	₹	4.00
Negative Differentiation	₹	0.40
Actual Perceived Value for Customer	₹	11.60
Consumer Surplus as given through Discount	₹	3.48
Price	₹	8.12
Cost Price	₹	7.50
Producer suplus	₹	0.62
Value Based Pricing/100 gm	₹	8.20
Value Based Price / 50 gm	₹	5.00
Value Based Price / 75 gm	₹	7.50
Proposed Pricing	₹	7.50

Table 10 Source Grus & Grade Value Based Pricing Calcuation



13.0 Competition and Stakeholder Strategy



13.1 Blue Ocean Strategy

13.2 Five Force Analysis

Buyer Bargaining power : Gain initiative has increased the bargaining power of Nutri Shop owners as they now collectively purchase at fixed cycle.

Supplier Bargaining Power: With the increased efficiency and cycle rotation due to backward integration of demand (created by awareness) the supplier's power has also increased but the scope is towards sustainable power distribution.

Threat of New Entrant : The market is not saturated for Nutri Products as such there are no imminent threat of new entrant.

Threat of Substitute : Substitute products such as +F oil for Vitamin D, Fortified Rice and Wheat for Iron and Zinc etc. in nutrition segment has been introduced by Gain. The awareness has been created by various change interventions and purchasing based for products has been created. Further initiatives for budgeting of workers and income analysis to expenditure are being done.

Competitive Rivalry : There are not much coemption as on date and future competitive strategy can be channelled as per blue ocean strategy.

Figure 4 Source Grus & Grade Blue Ocean Strategy



13.3 Critical Thinking Model

Sustainability in operation for Supply Chain of Nutri-Products

The sustainability in supply chain has been derived by interplay of following strategic BCG matrix:



Cost of Intervention / Change Initiative for Supply

Thus, the strategy formulation towards those interventions which has low cost and high desired outcome. The change interventions are being mapped by demand cycle, qualitative and quantitative interviews to arrive at those interventions that has maximum desired output.



13.4 System Approach



13.5 System archetype : A Study of Balancing and Reinforcing Loops

Figure 5 Source Grus & Grade Systems Diagram

13.6 Derivative and Linages : Best Practice Adoption Strategy

Backward Linkages

- Kitchen Garden
- Awareness Program
- Waste Mangement and manure development
- Retailer Integration
- Logistic support
- Skill Development

Forward Linkages

- Market generation
- Mobility creation for suppliers
- technological interventions for inventory management
- health and environment related initiatives for sustainable model generation.

External Linkages

- Link various programs of Govt to support sustainability
- Rope in other agencies for synerrgy
- Tea Estate Maangement inititives to be integrated with Gain for more synergy



14.0 Distribution Channel

14.1 Purchasing Behaviour of TE Labourers

- Dependence on credit for purchase
- Preference for small SKUs
- Fortnightly payment and purchase cycle
- Low quantity and value purchase per instance
- Logistic constraints and employment terms prevent visit to major markets

14.2 Seller Behaviour

TE Retailers	Large Retailers & Wholesalers
 High preference for fast moving items and low inventory Sticking to customers taste Purchase through intermediaries Low awareness of product labels 	 Preoccupation with margins & volume Preference for cash dealings Low engagement in push sales Low awareness of product labels

14.3 Insights Driving Supply Chain Strategy

Demand	Supply
• Food consumed is basic,	Multiple PDS within garden area. Major
 high on carbohydrate, rice and potato 	point for high footfall, largely due to rice
 Low on vegetables and leafy green (low demand, low availability) 	 One Bagan Bazaar in one garden Or One Amar Dokan in one garden
 Low milk and milk product intake (low availability) Low most and agg consumption (near 	 1-4 grocery shops in each residential line. Ease of accessing basic food keeps the HHs within the garden
• Low meat and egg consumption, (poor affordability)	 Grocery shops access wholesalers in
 Price sensitivity is high, leading to most points of purchase (PoP), selling similar products, or similar price points. Price vary largely due to cash or credit purchase 	 neighboring towns to get their stock of products on a frequency of weekly or fortnightly. Shops offer credit to their customer HHs to retain their loyalty. Credit is paid back
 Convenience of purchase : HHs make purchases mostly from shops/bazaar 	every 15 days as workers get their wages.





within garden area. Shop at haat bazaar while appears on the wage day. Purchase from neighborhood shop is triggered by credit purchase. Children	
also are sent to get the products from these shops	
 All are associated to garden and have access to information. Tea workers union are proactive and push for benefits. Therefore, programs need to 	
be transparent with operations and outcomes.	



15.0 Three Types of Distribution Channels to Choose From

Figure 6 Distribution Type I for Unpackaged Items



Figure 7 Distribution Channel II Packaged Item (High Price SKU but Lower Volumes e.g. Horlicks





Figure 8 Distribution Type III of Packaged Item (Low Cost SKU but High Volume e.g. biscuit, chips)

16.0 Retail Access Points

	Retail Access	Points and T	Their Relevance	for TE Population	
Access point	Location	Density of units	Outreach by sellers	Difficulty of Access	Purchase frequency by TE population
Small retail shop	Labour lines and nearby hamlets	High	Low	Little time or cost	High
Mobile Vendors	Labour lines	Low	Moderate	Little time or cost	Moderate
Haat	Within TE or adjacent TE/village	High	Moderate	Little time or cost	Moderate
Large retail shop	Nearby town	High	Nil	Time consuming but low cost	Very low
Retail-cum- wholesale shop	Nearby town	Moderate	Nil	Time consuming but low cost	Very low
Large wholesale agency	Major economic hub	Low	Nil	Time consuming and costly	Nil
Distributor	Major economic hub	Low	Nil	Time consuming and costly	Nil

Table 11 Retail Access Points



17.0 Supply Chain

A combination of two approaches:

- 1. Retail + home delivery
- 2. Retail + last mile entrepreneur

Retail + home delivery	Retail + last mile entrepreneur				
OBJECTIVE					
Maximize the demand from different residential lines in the garden using a home delivery model	Maximize the demand from different residential lines in the garden using an entrepreneurship model				
RETAIL STORE					
 Revenue estimate: Rs.25000 per month (10% retail margin) Reach out to maximum households, assuming 50% reach and 50% of the monthly spend on food Store can offer 2-3% discount to customers Can create scheme for buying food stock for the entire month. 	 Revenue estimate: Rs.25000 per month (10% retail margin) Reach out to maximum households, assuming 80% reach and 50% of the monthly spend on food 				
PAYMENT AND DELIVERY					
Technology Use:	Entrepreneurs:				
 Use of app or phone message by households to place order for food products with ABB. Use of digital payment methods Method of order delivery: One/Two delivery persons can be appointed to deliver the ordered stock at homes. Use of a mobile store to carry ordered stocks and ready stock for spot sale Payment can be collected by the delivery person Deliveries can be planned at fixed time during the day in different residential lines. Ordering cycle can be planned for different residential lines. Particular 	 An entrepreneurship model can be designed for the 'last mile reach'. Two Entrepreneurs per garden can start a mobile ready stock cart. They generate demand in dedicated residential lines. Procure stocks from the ABB and sell in the residential lines Can use of digital payment methods The ABB functions like a wholesaler. The mobile entrepreneur's function as last mile retailer. The margins for ABB will be 2-3% Margins for entrepreneur will be up to 10%. They can offer 2-3% discount to customers to build loyalty. 				
day of the week can be planned for specific residential lines					

Table 12 Supply Chain Strategy



18.0 PROMOTION

Behavior Change Funnel for TE Workers



18.1 OBJECTIVE

80% Market Penetration in 12 months

18.2 Target Market

- 1. Parents
- 2. Pull Influencers Educators, Doctors, Nutritionists
- 3. Push Influencers Retailers
- 4. Children

18.3 Message

- > Eat better, feed better, live longer.
- > Make better use of your food money
- > Show markets of improvement and success

18.4 Media – Demand Generation (Pull Approach)

We created a Change Intervention Effectiveness Measurement Chart to select the mediums that gave the best impact on earlier occasions within the same ecosystem.





Change Intervention Effectiveness Measurement

The following were noted:

- 1. The awareness initiatives launched by Gain has created an awareness level for inducing nutritional food items in Tea Estate.
- 2. The constraint limiting the awareness and desire into actual purchase of nutritional food is limited by the following factoRs.:
 - a. Average member of people per household is 4-5
 - b. Income per household per month are Rs.5000 on an average
 - c. Major expenditure is on necessities and there are very minuscule disposable income to purchase anything outside the month expense basket.



18.5 Street Play

Street Plays – Mass awareness appeal, interest for entertainment, high penetration, mass acceptance, low resource utilization



 Reduces monotonicity in Mundane Worker's Life

 Attractive & Entertaining - Leverage this to generate awareness in cost effective manner

• Introduce 'Chota Nukkar Natak'

 Increase local participation of artists

 Messaging focused on easy change intervention, as opposed to earlier unsuccessful ones that focused on changing lifestyle and behavior

like reducing salt intake etc.

Sampling in schools, haats, flyer distribution, and small budget on radio promotions.

18.6 Enabling Environment : Influencers 18.61 Children as Change Agent



Increase knowledge and awareness about health and nutrition – high frequency of sampling in schools (Milo strategy) Supplement with home sampling to convert knowledge into consideration set



 Increase participation of school machinery (teachers)to have permanent shift in knowledge and acceptability



manage the scare or show it as normal and harmless)

Long-term attempt: Increase income of households thus enabling consumption and demand. Induction of food industry as change intervention through cottage industry by 42.9% non-permanent worker families in estate. Long-term knowledge goals also include the messaging:

- 1. Eat plenty of seasonal vegetables and local fruits
- 2. Prepare your food in fortified Oil(+F)
- 3. Give one day per day to children