

# The Tale of the Edible Cutlery

Sanghamitra Das\*

## ABSTRACT

*This case throws light on the extensive revolutionary efforts undertaken by Narayana Peesapaty, a former scientist from the International Water Management Institute, who left his comfortable job, in pursuit of an alternative to plastic cutlery. He was deeply troubled by the extensive use of plastic cutlery knowing the fact that it has toxic effects on human beings as well as the environment. As a result of his quest for replacing plastic cutlery, he came up with edible cutlery. Peesapaty proved that through meticulous exploration, productive entrepreneurship, far-sightedness and creative imagination, it was possible to deal with social, economical and environmental challenges.*

*The case highlights the hurdles faced and the sacrifices done by Narayana Peesapaty for this nova status.*

**Keywords:** *Edible cutlery, revolution, plastic, people, entrepreneurship, environment, Peesapaty*

**KEY AREAS:** *The case is designed to accomplish the subsequent objectives:*

- *Presents the entrepreneurial nature of recognising the problem.*
- *Explains the central character's capability of out of the box thinking in the quest for a solution.*
- *Gyrates around main entrepreneurial qualities like passion, determination, and taking a tactical attitude to problem-solving.*

## INTRODUCTION

Entrepreneurs are the change agents; they innovate new panaceas for old problems. It proved true in the case of Narayana Peesapaty, a groundwater research scientist at ICMRI.

He was constantly worried about the plastic cutlery that is not only detrimental to the environment but also being a petroleum product, contains toxic chemical complexes and is also carcinogenic.

Thus, in 2006, he quit his well-paid job and set on his journey to explore the unexplored entrepreneurial grounds.

## PEESAPATY'S CREDENTIALS

A former researcher at ICRISAT, (The International Crops Research Institute for the Semi-Arid Tropic), Peesapaty has done his Bachelor's in Chemistry from Osmania University and MBAs from the Indian Institute

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\*Assistant Professor, Ajay Kumar Garg Institute of Management, Ghaziabad

of Foreign Management, Bhopal. As an Associate Research Director at AC Nielsen ORG-Marg, most of his assignments were around issues related to agriculture, forestry, cottage industries, rural development, etc. Then he worked with International Water Management Institute (IWMI), Hyderabad as Senior Scientific Officer, where his work mostly comprised research on energy and groundwater. He published many papers on groundwater management and other issues. He accumulated all his understandings about groundwater at the institute, which later on became the cornerstone for his entrepreneurial mission.

## THE TALE OF THE EDIBLE CUTLERY

Peesapaty was profoundly worried about the rapidly burgeoning usage of plastic in general, and throwaway plastic cutlery in particular. As he was a scientist, he fore saw the hazards that disposed plastic could cause to the environment, the people, and the Earth.

Narayana Peesapaty from Hyderabad realised the danger that plastic poses. His research showed that India alone contributed to 120 billion pieces of plastic cutlery and plastic needed a thousand years to break down. Plastic waste covers our oceans and landfill.

Plastic is sturdy, cheap, trivial and in plenty, but its sturdiness and bulkiness are why the environment is in distress. Most of the plastic utensils and cutlery discharge a chemical, known as styrene, which is the root cause of various diseases. So, it is domineering for us to take action and deal with this problem before it gets too late. His studies mainly focused on the USA, India and Japan as these three countries were the main users of plastic cutlery.

During his research, he found that most of the disposable plastic cutlery is manufactured in highly unorganised small units, where there is no provision for hygiene maintenance. No plastic cutlery user ever washes them before using them for food, thus exposing themselves to grease, lubricants, etc.

Thus the users of disposable cutlery are being exposed to chemical contamination and industrial contamination.

Another awful experience that Peesapaty faced while eating in a restaurant was that when he ordered lunch, the plastic spoon which was given to him was slimy which proved that the plastic cutlery which was to be thrown away after one use was being repeatedly given to customers and thus exposing them to bacterial infections. Thus he started to ponder for an alternative to plastic cutlery.

## DUAL CHALLENGE

While plastic was one of the major concerns for Peesapaty, another area of concern was the depleting groundwater level. As an immense amount of groundwater is drawn out each year for irrigation purpose, many parts of the country are experiencing rapid depletion of groundwater.

It was mainly due to the monoculture of rice and its early sowing. Further, with the perception that millets were poor man's food, it got substituted by rice and aggravated the problem. Farmers started excessive rice cultivation and eventually, it rotted in the warehouse.

This situation forced many farmers to leave agriculture and migrate towards urban areas, thus creating a rift in the system.

Thus Narayana was caught in a predicament whether he will be able to come out with a common solution for substituting rice production with other crops requiring less water as well as overcoming the challenges of usage of plastic cutlery.

As Peesapaty found a common connection between the two issues, he aimed to combat two very grim environmental issues i.e., extensive plastic use globally and incessantly diminishing groundwater level in India.

## THE BIG IDEA

The big idea dawned upon Peesapaty while he was travelling from Ahmedabad to Hyderabad. On the flight, he saw a co-passenger using “jowar” chips to eat his food. Thus “jowar” gave him the spark to make organic spoons in order to replace plastic cutlery.

The result of this quest was the development of an incredible product- the world's first edible cutlery. As his idea was unique, he got a competitive advantage and an awesome response from the international markets.

## THE INITIAL HURDLES

Peesapaty had to face many hurdles from the time of conceptualising the product to developing the prototype and marketing it. Though he had a clear idea of the product he wanted to produce, but he had to check the practicability of the idea.

During his research, he came to know that similar attempts have been made earlier also, but the people did not succeed or the ideas could not take off successfully. The cutlery which Peesapaty wished to develop had to meet certain parameters like sturdiness, longevity, holding shape. It was very difficult to meet all the specifications, but with his farsightedness and hard work, Peesapaty was able to come with the correct combination of components that would give the preferred output of vegan palatable cutlery.

As it was the very first of its kind, everything had to be produced from scratch. Even the machines and moulds had to be designed after much thought and hard work.

Narayana had to sell his houses at Baroda and Hyderabad and mortgage his house at Murshidabad to gather the seed capital for his startup venture.

## THE PRODUCT

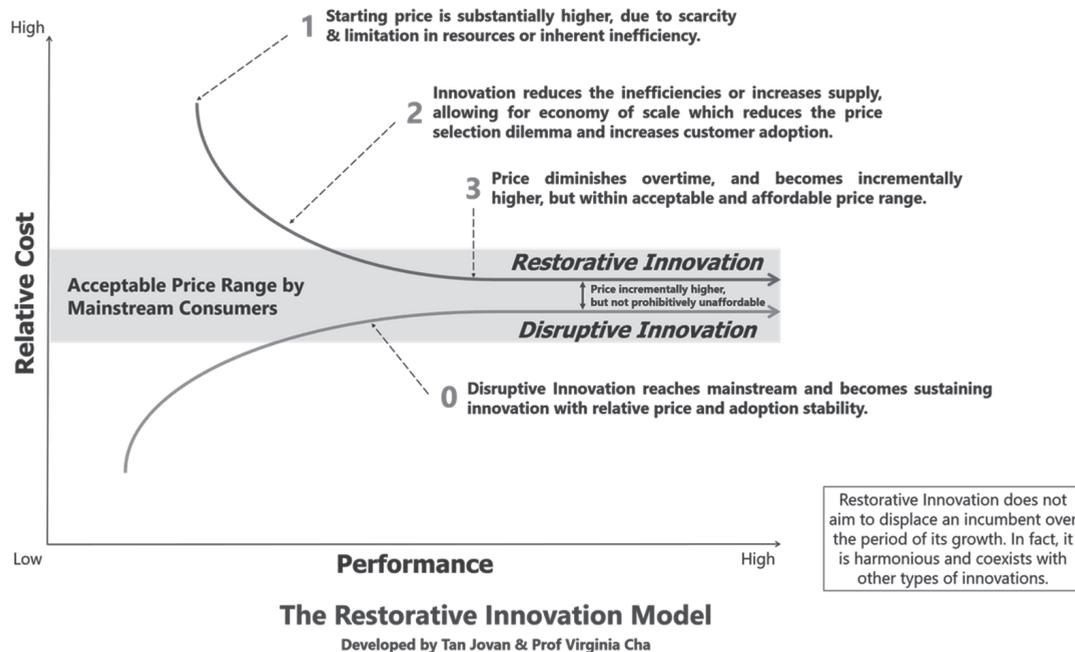
Sorghum (jowar) was chosen as the base ingredient as it met all the specifications required by Peesapaty.

The first cutlery made by the company was a spoon made with rice, sorghum and wheat flour. They are vegan, without preservatives, trans-fat and dairy-free and bio-degradable in nature. As they come in various sizes, they can be used for both eating and serving food. As these cutleries come in various flavours like cinnamon, ginger, cumin, sugary, spicy, they are a treat in itself.

The products are dehydrated and toughened by sweltering at high temperature. They are sturdy enough to endure hot beverages to chille dice-creams for about 15-20 minutes without decomposing. If the cutlery is not consumed and thrown away, it can be consumed by animals, in case it is not consumed by anybody, it will disintegrate in 2-3 days. The edible cutlery has a shelf life of up to three years in case it is stored in a cool dry place. This is all because the main ingredient being sorghum, which can grow in arid land and drains very less water than other crops. As it is environment friendly, it can be grown on a huge scale. Thus, Peesapaty was able to fulfil his dream of replacing plastic cutlery as well as give a solution to the depleting groundwater level.

Currently, Bakeys sells three types of products: Spicy Spoons, Sweet Spoons and Plain Spoons, priced at Rs 300 for a set of 100 spoons.

### Bakeys Edible Cutlery- A Restorative Innovation Model



**Restorative innovation** is demarcated as a model integrating strategy, projects, products, and concepts designed to reinstate health, humanity, and the environment. It has the following characteristics-

- High charge
- Greater quality
- Philanthropic outlook

Bakeys has adopted the above restorative innovation model. It has been priced costlier as compared to plastic cutlery; it is edible and so it has to be of better quality than plastic, thirdly Peesapaty wishes to save the environment as well as the human race from the perils of plastic pollution, which shows his altruistic mindset.

## BRANDING

A research scientist who had no idea about baking had to visit many bakeries to learn the art of baking his cutlery, and after many experiments, he finally established his cutlery baking manufacturing unit named Bakeys Private Limited in 2010.

## OPERATIONS

In the initial days when he launched the product, he used to demonstrate his products in a park in Hyderabad and explain about the ill-effects of plastic cutlery and the advantages of edible cutlery to the people visiting the park.

Initially, he did not have any buyers, even though he had done very reasonable pricing of his products. There was no demand for his new product and a huge debt-burdened him, so much that he started thinking of quitting.

One day some people from the bank came and ordered Peesapaty to vacate his flat, as he was not able to pay off the loan he had taken for his new venture, and as Peesapaty had nothing to give he started explaining about his cutlery to those bank people and finally they got impressed and purchased some packets of cutlery from him.

Peesapaty got his breakthrough when his story was shown in media, he started getting business and his sales increased.

He started getting an immense number of mails and orders. He also received a fund of USD 3, 85,000 from various funding partners.

Just when Peesapaty had started thinking of quitting, his business took off and got the first taste of victory. He started receiving a huge number of orders, which became difficult for him to manage.

## MARKET OPPORTUNITIES

### Competition

As there is no edible cutlery in the market, it can be said that there is no competition, but as it is a substitute to plastic cutlery and plastic cutlery comes in various colours, then there are those which are coated like stainless steel, so plastic cutlery is itself a competition to edible cutlery.

Secondly, plastic cutlery is very price-sensitive, it comes at very economical prices. But the strength of edible cutlery is that it is not carcinogenic, it is biodegradable, it is compostable, and it is nutritious. Thus, the cutlery that can be eaten up provides vast opportunities. They can come in various tastes and flavours and hence can be matched with the specific type of food. For example, an ice cream spoon can be matched with the flavour of the ice cream.

The plastic cutlery has the disadvantage of leaking chemicals while such shortcoming does not apply to edible cutlery on the contrary they are nutritional.

### Sales Plan: Target Customers

After a thorough study of the market, it was decided to cater to the below three segments to start the sales

- 1) Event managers and high-profile caterers supplying to niche segment (in Hyderabad, Mysore, Bangalore and Chennai)
- 2) Distributors of competing products.

Apart from the above, they are also serving it in hospitals along with the diet food to patients and also doctors and nurses to eat it in their canteen. They are also looking for corporate schools where lunch is served to the students. They also had talks with the corporate offices especially the IT sector to introduce the cutlery as a corporate social responsibility towards using less water for washing utensils and also to make them aware towards the environment.

In this way, they wished to create awareness among the masses so that in future they can directly reach the end customers.

Bakeys have collaborated with the Café Coffee Day chain. They had discussions with Paradise Biryani in Hyderabad, Aasife Biryani in Chennai and some other corporate houses.

They also sell directly from their websites and also set up stalls at fairs and exhibitions.

## FOREIGN MARKETS

Bakeys also wishes to capture the foreign market, but there also disposable cutlery is very price sensitive. There are many soup outlets also where these can be used.

## CHALLENGES ABROAD

The main ingredient i.e. sorghum that is used for making edible cutlery comes in the negative list. Secondly, the export policies regarding the cereals keep on getting reframed, so to get a hold in the foreign markets, overseas manufacturing units need to be established.

Setting up production facilities in various locations in the foreign land will also have an additional advantage. Many countries have very strict rules and regulations regarding food import. Hence,

- 1) Processes have been developed for making cutlery with oats, corn, barley, and soya flours so that locally accessible flours can be used for manufacturing purpose.
- 2) Due to local production, within the provisions, less time gap will be there.
- 3) There will be less transportation time and lower logistic costs.

## THE VISION

Though Peesapaty had come up with a positive product, he was still not able to make it a substitute for plastic cutlery. He hopes that in the future, with the disposable cutlery market being very price sensitive, they will be able to manufacture the spoons at a price that is as less as plastic, then it will be accepted by the people very easily and they will stop using the unhygienic plastic cutlery.

Peesapaty also has plans to start a healthy food chain which will give competition to the global giants like KFC and Mc Donald's.

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