

Abhyuday

Reliving the Legacy



24TH
EDITION

MARCH
2020

AIR BASED FOODS

Next generation of foods from
Air, CO₂, Electricity and Extremophiles

This Issue

Words from the Editor's desk...

Hold fast to dreams,
For if dreams die,
Life is a broken-winged bird
That cannot fly.
Hold fast to dreams
For when dreams go,
Life is a barren field
Frozen with snow
- Langston Hughes



To all the distinguished readers

On behalf of team ABHYUDAY, the batch of PIETHons brings before you the eagerly awaited 24th edition of the magazine.

Food cannot be produced from air! Says who? In this edition, Dr. Shekhar Kadam (CFTRI alumni, 2008-2010) sheds light on a technology of the near future: 'Air-Based Foods'.

The Industry is abrim with newly launched products and policies. Tempting you to many such exquisite in the Industry Buzz!

Mr. Vijay Sardana, (CFTRI alumni, 1990-1992) speaks about his personal achievements and experiences in the experience talk.

Take a glimpse into life at CFTRI and relive yours, in Kampus Khabar.

From a small restaurant in Bengaluru to one of the most widely known Processed Food Manufacturers in India, Food Incorporated shares the success stories of Mavalli Tiffin Rooms, popularly abbreviated to MTR.

Shine bright individually, Shine brighter in a team. Career corner talks about team playing.

Going down the memory lane, Dr Shekhar Kadam pleasantly recollects and shares personal anecdotes of his time at CFTRI.

The marvels around the globe have never ceased to amaze us. In What The Food, we bring forth to you one of such delicacies from Japan: The wasp crackers! Yes, you heard it right.

Extending our warm congratulations to the dearly loved Soup-A-Stars, in the placement section!

Unwind in the Games Section! Take a break from jumbled lives, and unjumble delicacies from around the world.

Missing CFTRI much? Photography page brings to you the worldly views from CFTRI. Miles away, but forever a part of your heart!

Without taking any further of your time, we invite you to the beautiful world of Abhyuday. As learners, we eagerly look forward to your suggestions and feedbacks.

Happy reading! Enjoy flipping!

Regards
PARTHI DESAI

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About Abhyuday.....

Emerging as a pioneer in food research in 1950 and continuing to provide an impetus to the food and allied sectors, CFTRI is the backbone of food-based scientific as well as industrial developments in India. The genesis of Abhyuday owes itself to the heritage that was created by the great minds that have been a part of this institution ever since the beginning and emerged from here as successful individuals spreading the glory of this place far and wide.

Abhyuday is a Sanskrit word which means beginning or awakening...

Awakening for re-inventing the vigour and strength by breaking away from the shackles of mediocrity and sombreness...Awakening for being the change and leading the way...

The e-newsletter, it is expected, would try and achieve its goal of promoting dissemination of the right and benign knowledge and act like an umbilical cord that would keep us connected to our mother institution.

Industry Buzz will include the past months developments in food industry viz. M&A, new product launches, new market entrants, market reviews, inventions and innovations etc. The Cover-Story will track one most important development of the month in the food industry with a detailed analysis from all the quarters. What The Food! will shed light on the interesting and lesser known facts about food. Kampus Khabar will attempt to track the campus news, developments, conference and seminars, tech-talks by our alumni. Career Corner would be the space where articles related to interpersonal and communication skill development, interview etiquette, CV writing skills etc. would be stressed.

The most exclusive of all the sections would be the Alumn Column which will feature technical articles, literary and artistic works, tweets and blogposts, creative and memorable contributions by our distinguished alumni. Also, we shall run a feature on one prominent CFTRIian in any field in each edition.

Besides, updates regarding upcoming seminars and events, congratulatory messages on birthdays and anniversaries, placements and promotions of alumni will also be featured. Advertisements from industries and entrepreneurs will also be featured for free. With a view to ensure the involvement of the readers and make the experience worthwhile, some games like crosswords, food quiz, jigsaw puzzles, riddles etc. would also be incorporated.



CFTRI ALUMNI FAMILY INVITES YOU TO

NOSTOS

CALLING YOU BACK HOME...

(CFTRI ALUMNI MEET 2020)

*After all is said and done, and no matter where we wander off to,
the only thing we come back home for, the only thing we come
back home to, is love.*

16th MAY 2020

IFTTC AUDITORIUM



*Specially hosting
1993-1995 Silver Jubilee batch
1969-1971 Golden Jubilee batch*

Warm Regards,
Office Bearers
(CFTRI Alumni Family)
Soup-A-Stars(2018-2020)
PIEthons(2019-2021)



AIR BASED FOODS

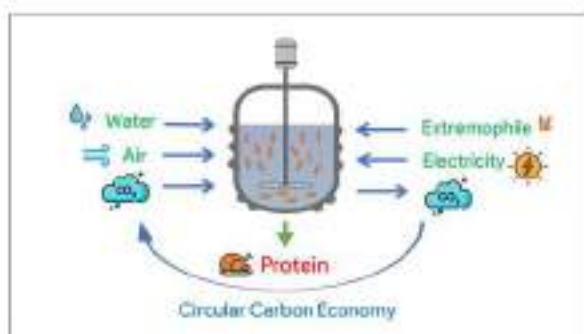
Next Generation of food from Air, CO₂, Electricity & Extremophiles

Recent innovation trend to achieve sustainable food production system is Air-based foods, inspired by 5-decade old NASA experiment. So, what are Air-based foods? Air-based foods are made using air, carbon dioxide or electricity as one of the substrates. In most of the cases, fermentation or catalytic reactions could be major unit operation. Generally, carbon dioxide is used as source of carbon, whereas energy is supplied through either hydrogen or electricity. Traditionally, carbon dioxide could be captured from atmosphere using Carbon Capture and Storage (CCS). Moreover, new methods like Direct Air Capture (DAC) are also being developed.

In its first publication in 1967 about Air-based foods, NASA reported use of hydrogenotrophs, microbes that can metabolise hydrogen as source of energy and convert carbon dioxide and air into a physical protein. . Simply put together, this process is similar to making wine or beer, where yeast is used to convert sugars into alcohol. For Air-based foods production, instead of yeast, extremophiles are used to convert air, carbon dioxide and electricity to protein rich foods.

With ever growing population and climate change concerns around the globe, there will be demand for sustainable food production processes to fulfil optimum nutrition. As per current estimation, world's population will reach over 9 billion by 2050. Thus, providing nutritious food to everyone will be a challenge. Our current methods of food production especially protein rich foods, use more and more livestock-based products than plant-based products. This could be a dangerous trend because producing meat - based protein consumes more resources than plant-based proteins, leading to estimated increase of 30% greenhouse gas emissions by 2050. Air-based foods majorly produce nutritious

protein rich ingredients using primarily air, carbon dioxide and electricity. It produces high value food ingredients using minimum resources (land, water and raw materials), thus making it more sustainable compared to contemporary food production processes. In current scenario, this technology is still at an infant stage, so the cost of commercial development could be high, safety aspect of food made from extremophiles also needs to be validated.



After more than 50 years of its discovery, this technology is gaining momentum

research and start-up ecosystem, to mass produce food using air, water, carbon dioxide and electricity. In this article, five such start-ups are outlined with respect to their background, aim and recent developments.

Air-based foods are being developed on model to achieve circular carbon economy, and assist in meeting food demands of growing population.

Start-ups Developing Next Gen Air-based foods

1. Air Protein

Air Protein in collaboration with Kiverdi is working on meat alternative protein rich flours. Air Protein and Kiverdi, both companies are headed by Dr. Lisa Dyson. Air protein uses elements found in the air we breathe, like CO₂ as a carbon source. As per their website (airprotein.com), probiotic production process can get its energy from the sun in the form of solar power, but it can also use wind, geothermal, or hydroelectric power. The power is used to split water and uses microbes called hydrogenotrophs. The process takes place in fermentation vessels. Growth occurs through a proprietary probiotic production process where the hydrogenotrophs are able to consume the CO₂ and other elements to produce amino acids. While crops require months to go from seed to harvest, Air Protein's probiotic production process is ready for harvest in hours. Air Protein flour doesn't require additional extraction and has an approximately 80% protein.

2. Solar Foods

Solar Foods is producing protein ingredient, Solein — composed of 65–76% protein. Company believes Solein is made using a process that is efficient in reducing greenhouse gas emission, land and water use by 5, 60 and 100 times, respectively. It is spin-off from research centres of VTT & LUT University in Finland. Previously, both of these research centres have collaborated on initiative 'Neocarbon Food — Food from Electricity'. Details of this project and principle mechanism of this technology can be found on their website.

3. Sustainable Bioproducts

Sustainable Bioproducts is based out of Chicago and uses filamentous fungus named 'MK7', found in volcanic hot springs at Yellowstone National Park, US. MK7 is an aerobic, so it grows on air and specific nutrient medium.

Company claims, with their novel fermentation process, MK7 can produce protein with all 20 amino acids including 9 essential ones. This protein also contains heme (flavor protein of meat), thus producing meat alternative would be easier, compared to using plant proteins. Further details can be found on their website (sustainablebioproducts.com).

4. Air Co.

This company has claimed to have developed first carbon negative vodka (removes 1 pound carbon per bottle from atmosphere) using solar power and carbon dioxide from air. Unlike other Air-based foods mentioned above, this vodka is not made using fermentation. Inventors say, it is made by mixing carbon dioxide, water and renewable electricity over a specific catalyst which is proprietary to the company. Vodka bottle is currently available only in New York, for \$65.

• Further Reading

1. NASA, (1967). Study of life support systems for space missions exceeding one year in duration phase IA.
2. Jani, S. (2016). Sustainability of protein production by bioreactor process using wind and solar power as energy sources.

This interesting product's details are available on their website (aircompany.com)

5. Novo Nutrients

NovoNutrients uses bacterial fermentation to manufacture aquaculture feed with 68% protein. The bacteria used for this process, feeds on carbon dioxide from industrial waste stream for carbon and on hydrogen for its energy requirement. Further details can be found on their website (novonutrients.com).

Although these start-up companies are at infant stages of their development, they are showing promise to build a sustainable future where nutritious food is made using air, carbon dioxide, electricity and extremophiles. For next decade, it will be interesting to see how they approach large scale manufacturing and produce commercially available food for ever growing population using the same technology identified to mankind 5 decades ago.

INDUSTRY BUZZ...



1. Brew House launches India's 1st certified organic ice tea

20 Dec 2019

Brew House Tea Brewing Co. has launched India's first certified organic ready-to-drink ice tea, which is available across all metros and Tier-I cities. Established in the year 2017, it has always emphasized being an all-natural company, and has recently been certified organic, by USDA and India Organic. The tea is real-brewed at the brewing facility of the company right before bottling, and never made from concentrate or tea powder. Currently available only in glass bottles, the brand will soon roll out affordable variants, to cater to a larger market. With the changing trends in the market, and rising inclination towards organic, Brew House is all set to disrupt the ice tea market with its superior quality, taste, organic ingredients and preparation from whole tea leaves.

<https://healthvision.in/brewhouse-launches-indias-first-certified-organic-ice-tea/>



2. ITC's Fabelle launches FMCG chocolate bars infused with Ruby Chocolate **12 Feb 2020**

ITC Ltd's Fabelle, acclaimed for redefining the Indian luxury chocolate segment, entered into the FMCG chocolate segment in two formats, Fabelle Choco Deck and Fabelle Soft Centers in 2018. Fabelle has announced the launch of a unique and differentiated Fabelle Choco Deck Milk and Ruby Chocolate to delight chocolate connoisseurs. This latest addition to Fabelle's range of layered chocolate bars, Fabelle Choco Deck, is India's first mass premium chocolate bar containing the new Ruby Chocolate. Fabelle Choco Deck Milk and Ruby Chocolate has been specially crafted with a layer of Ruby Chocolate between two layers of Milk Chocolate, bringing together the mild fruity taste of Ruby Chocolate and the rich sweet taste of Milk Chocolate. The chocolate also contains almonds and crisps, which give it a crunchy texture that complements the smooth texture of the Milk and Ruby Chocolate.

<http://www.hospitalitybizindia.com/detailNews.aspx?aid=35762&sid=23>

3. Mondelez India launches Cadbury Chocobakes, chocolate filled cookies

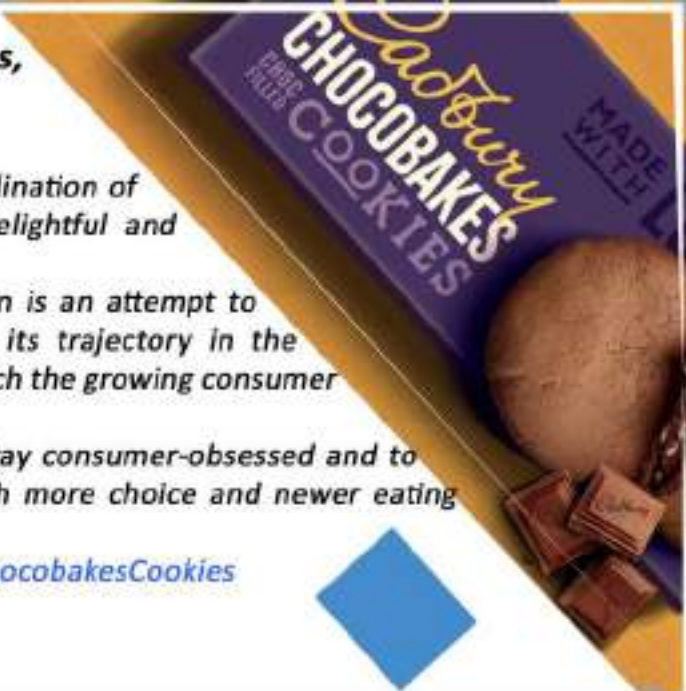
8 Jan 2020

Cadbury Chocobakes Choc-filled Cookies, is truly a cross-pollination of the iconic chocolate and biscuit category, delivering a delightful and unique experience for the consumer.

Unlocking the potential of indulgence, this latest innovation is an attempt to further premiumize the biscuit category while expanding its trajectory in the country on the back of agile innovations that continue to match the growing consumer expectations.

This initiative underscores the company's commitment to stay consumer-obsessed and to empower consumers to snack right, by providing them with more choice and newer eating experiences.

<https://in.mondelezinternational.com/newsroom/CadburyChocobakesCookies>



4. Center Fresh 3-layer Mint launches Fruity Mints

12 Feb 2020

Center Fresh 3 layer Mint, a unique offering with which Center Fresh forayed into the mint candy segment, continued its success in 2019. The brand has now announced an introduction of a new flavor, Center Fresh Fruity Mints, a novel combination of fruit and mint flavors. This extension is aimed at increasing penetration by bringing in new consumers into the consumption fold. This offering would be an additional option for the consumer, apart from the existing peppermint flavor of the brand.

<https://www.prnewswire.com/in/news-releases/perfetti-van-melle-india-expands-center-fresh-brand-portfolio-with-launch-of-center-fresh-3-layer-gum-843704237.html>



5. iD Fresh unveils Sip Tender Coconut, Grated Coconut in eco-friendly packaging.

14 Feb 2020

iD Fresh Food now presents its eco-friendly packaging with the launch of iD Smart Sip Tender Coconut and iD Grated Coconut in a Coconut. This, according to the company, marks India's largest fresh food brand's maiden effort in finding sustainable packaging solutions for a greener and healthier tomorrow. With #KnowYourCoconut as its core message, iD Fresh's Smart Sip Tender Coconut empowers customers with valuable information without opening the coconut that was hitherto unavailable to them. With its grated coconut offering, iD Fresh offers consumers not just convenience, but also a healthier alternative to chemically-preserved frozen or desiccated coconut that is currently available in the market. iD's grated coconut is a healthier alternative to the chemically-preserved, frozen or desiccated coconut that is currently available in the market.

<https://www.goodreturns.in/news/id-fresh-food-launches-coconut-range-with-innovative-natural-packaging-1133936.html>



FSSAI Rules and Regulations



Food Safety and Standards Authority of India

1. RAPID FOOD TESTING DEVICES AND KITS SET TO REDEFINE FOOD SAFETY IN 2020 DEC 31, 2019

The Food Safety and Standards Authority of India (FSSAI) has made a quick progress towards the use of advanced technologies for food testing in the year 2019. In 2019, FSSAI had finalized the regulations for approval of rapid testing devices, kits and methods to strengthen the food testing ecosystem in the country. FSSAI has so far approved 30 rapid food testing kits/devices under these regulations. FSSAI is also providing these kits/devices to the State Governments for use by field officers and get quicker & validated results for tests conducted on different food products such as milk and edible oils, amongst others. Only two out of 30 rapid kits/ devices are indigenously manufactured and FSSAI has initiated steps so that indigenously developed kits/devices are validated and approved under the FSSAI regulations on a fast track basis.

for further information :

https://www.fssai.gov.in/upload/press-_release/2019/12/5e0aef71cb3epress_kits_31_12_2019.pdf

2. ACTION PLAN FOR SAFE AND QUALITY MILK AND MILK PRODUCTS NOV 26, 2019

On the occasion of 'National Milk Day', Food Safety and Standards Authority of India (FSSAI) released Action Plan for Safe and Quality milk and milk products. Subsequent to the release of national milk safety and quality survey report which revealed that only 7% milk samples had contaminants or adulterants that rendered such milk unsafe, FSSAI carried out a survey on milk products. Major quality concern observed is adulteration with vegetable fats with no concern about presence of heavy metal contaminants. Microbiological concern observed relates to poor hygiene, while no bacterial pathogens have been found. In this regard, FSSAI has developed and released a harmonized Scheme of Testing and Inspection (STI) to be adopted by dairy processing plants for the purpose of monitoring and self-compliance throughout their production chain in order to strengthen their internal controls.

For further information:

https://www.fssai.gov.in/upload/press_release/2019/11/5ddd5c991d016Press Release Safe Milk 26 11 2019.pdf

3. FSSAI partners with NASSCOM FOUNDATION TO BUILD A TECHNOLOGY PLATFORM FOR FOOD DONATION IN INDIA DEC 12, 2019

India will soon have access to a common help-line and a mobile application to donate food to the needy. FSSAI and NASSCOM (The National Association of Software and Services Companies) Foundation signed a Memorandum of Understanding (MoU) to jointly build a technology platform for Food Donation in India. The technology platform would have a 24-hour helpline number, an interactive application and a back-end website to connect donors with surplus food to food distribution organizations and will lead to seamless distribution of surplus food to the needy, across the country. This platform will also facilitate registration of surplus food distribution organizations, and initially, the network of 81 such organizations across PAN India, known as the Indian Food Sharing Alliance (IFSA) will be a part of this platform.

For further information:

<http://www.fssai.gov.in/upload/press release/2019/12/5df30c787221bPress Release NASCOM Food Donation 12 12 2019.pdf>

EXPERIENCE TALK

1) From a food technologist to a well-known economist and a full-time lawyer, how did you tread your career?

I never looked at education as a tool to acquire a job or career. My father told me there is always a demand for good professionals in every society, so try to be the best in your area of competency and work with honesty and integrity.

Based on this basic lesson of life from my father, I can only say that this journey will never end and today, It is a matter of some satisfaction that I am able to use all my knowledge base of dairy and food science and technology from leading institute of India, management knowledge from IIMA, knowledge of economics, policymaking, international trade and law at various levels and trying my best to bring correct perspective into the decision making process.

I started my career as extension work in villages of the desert in Rajasthan and today I get an opportunity to interact with decision-makers at various levels, in various organizations, and various forums within and outside India. The legal profession is very challenging and tests your capabilities and competency from all sides and in wide-open public forums.

2) How was your work experience as Head- Business Development & Communication at Tetra Pak India Ltd?

It was a great learning experience. I was the first person who was shifted from Alfa-Laval to Tetra Pak when the merge happened between to great companies. Top Management of the Company was kind enough to trust me and my knowledge base to promote aseptic technology in India. Today, most of the UHT products in India markets were initiated during my time, management gave me the responsibility to finalize the UHT milk standards. The launch of hygienic straw on tetra pack packages was my responsibility in India. During this time I had a great learning opportunity while working closely with Mrs. Lila Poonawala and Sh. HK Gupta top leaders of Tetra Pak India, Dr. V Kurian and his team, Sh. Prakash Chauhan and his team at Parle Agro and Mr. Adi Godrej and his team and many more leading personalities from India and outside India.

3) You have been a member of many expert committees. How challenging was it to manage?

I go to the committee meetings with one objective: truth and correct facts must prevail when the agenda is discussed. This should be the motive in committee meetings. It is very important that as committee members we all should remain neutral, objective and honest in your

VIJAY SARDANA

PGDM(IIM Ahmedabad), LLB, M.Sc.(Food Tech)(CFTRI), B.Sc.(Dairy Tech), PGD in Arbitration, Intl. dispute Resolution, IPR (WIPO), Justice (Harvard), Advocate & Arbitrator on Techno-Legal Issues, Risk Management & Trade Policy, Independent Director on various Boards & on Expert Committees.

Specialized in Techno-Legal Matters, Business & Commercial Laws, Trade & Technical Laws, Environment, Consumer & Welfare Laws, Contracts Negotiations, Drafting & Dispute Resolution.



approach. I take this as a serious responsibility and work hard on every agenda item so that one can contribute the best in the interest of society at large. I also acknowledge that sometimes friends and colleagues with their agenda or interest do feel upset with me for not supporting their agenda, but I have no regret because there should not be any conflict of interest and one must be committed to ensuring professional integrity when larger social interest is at stake otherwise there will be chaos if we all try to please everyone in policymaking. There these responsibilities are not perks but added challenge to your professional life.

4) How was your experience on the Member of Advisory Committees and Member of the Board of Directors at various organizations like SEBI, NABKISAN, ASSOCHAM, Stock Exchange, etc?

Let me confess that I am a fortune to get such opportunities to be part of many such vital decision-making bodies. It is a great opportunity to sit on such important forums with some of the best brains and professionals in their respective fields and learn from them about so many issues that were never taught in the schools or corporate world. Every meeting is a learning opportunity and an opportunity to give direction to the organization. It is easy to decide for a company because the implication is limited to the company's interest and shareholders' interest. In such neutral policy-making bodies like SEBI, it is a very high-pressure responsibility because every decision has very significant implications on all the stakeholders related to the organization and outside the organization. Therefore, one has to do a lot of homework and understand the issues of all the stakeholders and then decide what is the most appropriate decision and in the larger interest of the society. These forums helped me a lot in learning about society, competing forces and their conflicting interests.

5) In your opinion, where do you see India's economy in the coming time? How is opting out of RCEP Deal going to affect the Indian economy?

India is a land of opportunity and will remain so for all those who are willing to learn to compete at the global level. Soon India will be the most populated country in the world. All will look at India as an opportunity. The challenge is how soon we can upgrade our self to face the global competition at home. Opting out of RCEP only conveys to the world that India is economically and technically a weak nation and cannot face the global competition. This is not good for India's image. The issue is not that we are weak, the issue is what we all are doing to eliminate this weakness and willing to stand in a competitive world. So, a country we must work on National Competitiveness Policy with reference parameters like cost of production, transaction costs, quality benchmarking, innovation, etc to the best in the world in various sectors and work on them for next 5 years with honesty. The government must tell that after 5 years we will open Indian markets gradually so get ready to face the global competition and for the next 5 years industry should prepare itself. This is the only option left for us, otherwise, India will lose investments, talent, and opportunity to competing countries and companies. Consumer behavior will change faster than expected and we ready to face the change is the bigger question for survival.



6) How crucial is the contribution of the food and agriculture sector to make India an economy of 5 trillion?

The Agri-Food sector will remain the foundation of Indian society and economy because no other sector can provide more employment opportunities for the unskilled and semi-skilled human resources than Agri-Food sector. It will also be not wise to compromise food security and make India import-dependent as this will compromise the sovereignty of India in a globalized economy. Therefore, Agri-Food sectors will play a vital role vital base for the economy of India to grow to 5 trillion and beyond.

7) Would you share the experience of the most challenging situation you came across in the industries? How did you manage to tackle them?

There were many challenging situations in my career where the whole goodwill of the company and business were at stake. The best way to handle these challenges is to go into details and learn more about the situation. Carefully study the sources and reasons behind the issues or challenge, identify various options, consult various stakeholders including people involved on the ground including your workers, supervisors and contractors they can also add value from their ground-level experiences. Let me confess, sometimes most sensible and low-cost options were suggested by workers and field supervisors. Never underestimate their experience because in a fast changing world very often corporate managers are far away from the ground where actions are taking place, and they often work on secondary information. Your leadership and capabilities are tested when there is a crisis when everything is normal even worker supervisors and juniors can manage the day-to-day operations.

8) Where do you think RTC and RTE stand in the future Indian scenario?

Cooking is an art and this art is slowly dying in society. People will need something to eat to survive and to remain healthy. RTE and RTC products will fill the gap. Convenience, affordability and sustainability will decide the future of the food industry. Food safety and nutrition will be non-negotiable conditions. Consumer awareness will force companies to move towards 'sensible' food. As a practicing lawyer on techno-legal matters for the Agri-Food sector, I can say in the coming days' food regulations will be forced to change to ensure that bad food is out from circulation in larger public health interest and the interest of natural resource management.

9) Food industries are evolving at a dynamic rate. What strategies will help us to cope up with these changes?

As I mentioned consumers are concerned about their health and health of the environment in which they are living. Food industries must respect these sentiments of consumers to remain relevant. New technologies like nano-technology based sensors, genetic-technology, information technology, artificial intelligence, robotics, 3-D printing, new material sciences and many more new concepts clubbed will e-commerce and drones will force food companies to start thinking about the new world. Conventional wisdom may not work in the coming years. I feel it is high time even professional education systems like CFTRI, ICAR, CSIR, UGC, etc should take a hard re-look and think about what type of human resource will be required to run the future factories. We have to start planning now for the future from now onwards.



Kampus Khabar

CHRISTMAS CELEBRATION:



Just like everywhere else in the world, the much awaited Christmas Eve was celebrated with a lot of joy and enthusiasm by PIETHons and Soup-A-Stars. PIETHons showed their craftsmanship by recreating the birth of Jesus through dolls, and a dazzling Christmas tree stood beside it.

On the eve of Christmas, the students visited the church and sought the blessings of the Almighty. They started from the campus at around 10 O'clock in the night. After clicking a couple of pictures, PIETHons and Soup-A-Stars returned back to the campus, following which a cake was cut and shared among all near the crib.

The best things catch you by surprise. Christmas would have been incomplete without a Secret Santa. PIETHons and Soup-A-Stars gave tasks to their respective Secret Santa. Students took up the tasks with much enthusiasm and dressed up like tribals, school children, jokers and what not, to complete their tasks. Later after a fun session, everyone gathered near the crib to exchange gifts.

NEW YEAR CELEBRATION:

Both PIETHons and Soup-A-Stars warmly embraced the New Year, '2020'. The New Year's Eve began with games like Bomb on the City and Dumb charades. At the stroke of midnight, everyone gathered in mess lawn for cake cutting event. They released lanterns into the sky symbolizing hope for the New Year and bid a farewell to the past year by dancing to the beats of music.



INDUSTRIAL VISIT:

On 2nd January, the batch of PIETHons (1st year M.Sc.) and Soup-A-Stars (2nd year M.Sc.) set out for a three day industrial visit to Bengaluru and Hyderabad, respectively.

On the first day, Soup-A-Stars visited Hindustan Coca-Cola Beverages Private Limited, Ameenpur. Here they had the great opportunity to meet with our prestigious alumni, Mr. L K Routh and G Mohit Arvind. Further, they visited Regal Healthy Fine Food Private Limited, followed by Telangana Foods, Modern Foods Enterprise Private Limited, National research center on meat and Dolphin foods India Limited. Finally, they ended their visit at ICMR.

Following the footsteps of their senior batch, the batch of PIETHons initiated their visit with Hindustan Coca-Cola Beverages Private Limited, Bidadi. They were eager to learn the processes in the plant, and had a brief interaction with the personnel in charge. Later that day, they visited a brewery 'Amruth distilleries'. On the following day, they were warmly welcomed by the aroma of bread in Rajashri Food Industries, thereafter which they winded up the visit for the day at Mother Dairy unit of Karnataka Milk Federation. They concluded their visit on the next day at Godrej Tyson Foods.



REPUBLIC DAY CELEBRATION:

The Republic day was commemorated at CFTRI on the 26th of January, 2020. The patriotism and love towards mother land was displayed. Students, research scholars and scientists attended the celebration. The chief guest hoisted the tricolor flag with dignity and admired it. The young and energetic children of the CFTRI school marched their way to show reverence to the nation. It was an exuberant celebration. The celebration was concluded with the distribution of sweets.



VALENTINE'S DAY:

On the occasion of Valentine's Day, 14th February, all Soup-A-Stars expressed their love by writing secret wishes to their juniors and classmates, along with their love wrapped up in chocolates. All of them exchanged Valentine wishes among them, as friends are your first love, and addressed a secret love letter to their crush and friends, and dropped them secretly in a box kept inside the IFT room. These letters were then opened on 19th February at 9:30 pm in IFT room. Everyone had a good time laughing whole heartedly that night.

AALAP:

CFTRI has always provided the stage for budding artists to showcase their talents. Singing is one among them, and CFTRI has been blessed with the best of singers. A singing competition was organized on the 15th of February, 2020 by the IFT club. A lot of participants enrolled in the event, which were encouraged by an appreciative audience gathered at the IFTTC auditorium.

The competition was judged by Mr. Saayed Shah, Ms. Anitha (Hindi officer), Dr. R P Singh (coordinator M.Sc. Food Technology) and Mr. Mohammed Shakeb.

Ms Anagha Priya, Ms Tinkle Dubey, and Mr. Shyam S Verma bagged the first, second and third positions respectively.



FOOD IN'CORPORATED



MTR FOODS : AUTHENTIC INDIAN FOOD

A 100-year-old legacy is not something that a lot of food chains in India can be proud about, but Mavalli Tiffin Rooms, popularly abbreviated to MTR, is an exception.

The consumer of today is vastly different from that of a few years ago – technology has taken over our lives, making it simpler and more complicated at the same time. Our target consumers do not have the time, technical know-how and sometimes even the inclination to make food from scratch – specifically Indian food that is perceived as cumbersome, heavy and time-consuming. We need quick solutions to our food dilemmas. Food plays an emotional role in our lives, but with the advent of this fast-paced life, we don't have the patience to wait for it. With a click of button, delicious food should reach our doorstep, ready to consume!

MTR is not a stranger to how an insightful packaged product can change a consumer's and manufacturer's life. In the 1970's, it had to shut down its iconic restaurant for a short duration, and realised the role packaged foods can play in the industry. The need to stay alive coupled with the demand from consumers for their loved products, gave birth to packaged foods business. From there came the vision, to be an indispensable companion in every kitchen to help create authentic and delicious Indian food.

MTR Foods Private Limited is amongst the top five Processed Food Manufacturers in India. It was established in 1924. 90 years down the lane, today they manufacture, market and export a wide range of packaged foods to global markets that include USA, UK, Australia, New Zealand, Malaysia, Singapore, Japan, UAE, Bahrain and Oman.

Having started as a small restaurant in Bengaluru in the pre-Independence era, MTR is a brand known to the whole country now. As a processed foods company, they serve customers across the nation, while their restaurants continue to be milestones in Bengaluru's history.

The MTR restaurants shut down in 1976 during the Emergency period, as they were generating losses due to the price cut rule. In an effort to save their poor labourers, MTR started selling their raw materials in MTR-branded packages at grocery shops in Bengaluru. Post Emergency period, restaurants were reopened, and MTR expanded their portfolio of packaged foods and started distribution across a wider geography.



The 3-Minute Breakfast Range is a great example of an innovation based on deep consumer insight. The Breakfast range is a result of reams of studies and observation, wherein it clearly showed the importance of eating breakfast. However, hectic lifestyles and increasing time-poverty have led to an increasing trend of youth skipping this meal altogether. Yet, if the time dimension and cooking-knowledge are taken out of the equation, the Indian consumer is sure to choose an Indian breakfast rather than a western one.



MTR offers 'complete meal solutions'. The wide range of products include Ready-To-Eat Curries and Rice, Instant Breakfast Mixes, Sweet mixes, Confectionery, Spices and Masalas, Beverages and a variety of accompaniments like Pickles.

MTR's deep understanding of culinary expectations and needs has resulted in many new and innovative products. The investments in infrastructure and technology ensure that MTR can scale rapidly and bring these to the market. Today, consumers across the globe count on MTR to bring them a natural, wholesome and delicious food that is also convenient for them.

MTR – THE MOST TRUSTED HOUSE HOLD NAME

100% NATURAL: All the Manufactured products are 100% natural, have no preservatives and use only the finest and the most authentic ingredients.

TASTE & FLAVOUR: Being an Instant mix or a Ready-to-Eat dish, or Pickles, all MTR products are known for their mouthwatering and 'home-cooked' taste.

UNCOMPROMISED QUALITY: MTR uses the latest technology in its manufacturing process, to preserve the Quality and freshness of the food.

TECHNOLOGY: The use of Retort technology from the Defense Food Research Laboratory, Mysore for the Ready-to-Eat products has won the President's Award.

VEGETARIANISM: All MTR products are 100% vegetarian.

It has a wide range of products, but even focusing on one domain i.e. the instant breakfast mixes, we will be amazed by the variety and diversity it offers.



INSTANT BREAKFAST MIXES

'Rava Idli mix' was first launched by MTR, adopting its own technology, which received great success. Encouraged by this response, the company launched a variety of instant mixes. Breakfast mixes are pre-prepared mixes and requires minimum cooking time. MTR manufactures different varieties of Breakfast mixes which are as follows:

- Instant Rava Idli Mix
- Instant Upma Mix
- Instant Rice Idli Mix
- Instant Dosa Mix
- Instant Vada Mix
- Instant Masala Upma Mix
- Instant Rava Dosa Mix
- Instant Poha
- Instant Khatta Meetha Poha
- Instant Ragi Dosa Mix
- Instant Dhokla Mix
- Instant Khaman Dhokla Mix
- Instant Vegetable Upma
- Instant Uttapam Mix
- Instant Oats Idli Mix
- Instant Sambar Mix
- Instant Ragi Rava Idli Mix
- Instant Magic Masala Upma
- Instant Oats Homestyle Masala
- Instant Regular Poha
- Instant Multigrain Dosa Mix
- Instant Oats Upma
- Instant Rasam Mix
- Instant Kesari Halwa

PLACEMENTS



MERCY RANI S



SHARATH KUMAR N

CAREER CORNER

Be a team player

Have you worked for teams where everyone pitches in, and all work together in perfect harmony? Do you always play to your strengths in a team?

If the answer is "no", then this article is for you.

Have you heard about how ants carry weights 50 times more than their own weight?

A single ant can only carry a small amount of weight, but when they work in a team, they are able to achieve much more. How do they achieve it? - "They work as a team". Ants don't just leave their fellow ants behind, but by helping each other they make it possible to achieve their shared goals.

This wonder works not just for an ant, but is a key concept for the survival of all organizations. Effective team work helps drive the organization towards success.

"Great things in business are never done by one person. They are done by team of people." - Steve Jobs

Why someone should be a team player?

Everyone knows the magic of being together. It is always important to have a "we" feeling rather than "me". Working as a team is such a vital way of completing projects, that it is worth developing and refining the skills that will help you make a valuable contribution to whichever type of team you're in. Being a team player, you can take advantage of a group's collective energy and creativity, so that the team can achieve much more in lesser time.

Being a valuable team member can open new career opportunities, because leaders may see first-hand what a great job you're doing. You may even be invited to bring your strengths into play in another team setting – and in higher profile, business-critical projects. This is why learning to be a good team player is so important. If you make a good impression, you never know what possibilities might open for you.



How can one be a real team player?

Adapt: In every team, each person is equipped with different ideas, learning and communication algorithms to do the same work. If you want to work with them, you must focus and adapt with their working behavior, in order to truly integrate and invite people for better outcome.

Shift: You have to abandon the idea that only you can do the work well and you are the smartest amongst all the team members. No one will be paramount for all the time and no one will be just followers. It is important to shift the role as every group is unique, different and dynamic and your role within that group must shift as per the situation demands.

Delegate: The delegated tasks will offer the team members an opportunity for learning and growth. Delegation requires the leader to turn the right tasks over to the correct people, at the right time, with the necessary resources, skills, and authority to complete.

ADAPT

SHIFT

DELEGATE

THE 4C'S OF A TEAM PLAYER

Several studies and research has revealed that, to lead a team as one, we need to look at factors such as commitment, contributions, communication, and cooperation.

Commitment - Obligation to the goals is the basis for co-operation in teams. When individuals are mutually accountable for the benefit of the team, the goal is reached faster and provides the best possible outcome.

Contribution - An effective team is in direct proportion to the talents the team members possess. Teams also need leaders to take responsibility for getting things done, but if only a few team members do most of the work, the team runs the risk of member indifference.

Communication - For a team to reach its full potential, members must be able to say what they think, ask for help and share ideas. Friendly communications are more likely when team members know and respect one another.

Co-operation - Most activities in the workplace today depend upon the degree of interdependence within the team. Team members must trust that when a colleague agrees to take on a task, the job will be done.

ALUMN COLUMN



DR. SHEKHAR KADAM

BATCH: 2008 - 2010

FOOD ANALYST AT KERRY

1. What was the name of your batch and the story behind that name?

Answer: Bellwether. Honestly, it just sounded cool at that time to be the batch name.

2. CFTRI life is full of joy and surprises. Would you like to recollect any such surprise that you have received here?

Answer: Before coming to CFTRI, I didn't expect my 2 years to be so full of happy memories and fun filled experiences, all I imagined was lots and lots of studies.

3. The intro-session is an integral part of CFTRI journey. Please share something about the same?

Answer: Every time I had to sing one of the double meaning Marathi songs, which was a bit embarrassing. However, my shyness melted away because of it. The good part about intro is that, I still remember small background details about my classmates, which would have not happened without Intros.

4. A strong bond between seniors and juniors is the beauty of the CFTRI culture. Could you please share some of your most vivid memories on the bonding?

Answer: There are lots of memories. Whenever seniors visited us, free food and 'free-ka-Gyan' from seniors was amazing. Seniors visiting us kind of worked as an inspiration to everyone and a way of finding one's direction in career. As always, every senior was so friendly, it made everyone at ease.

5. In a word, how would you like to define CFTRI and why?

Answer: 'Watershed moment'. CFTRI cannot be explained in one word or sentence. Those 2 years changed me from all perspectives and made me a better human being.

6. CFTRI has its own unique way to celebrate a festival. Which was the most memorable celebration for you in the campus?

Answer: Being Marathi, it's obvious to say, Ganesh Festival was most memorable celebration followed by Holi.

7. CFTRI changes everyone, by making us explore our personalities!!! Would you like to name any such particular moment/ activity which shaped your personality after coming to CFTRI?

Answer: Interaction with friends from every state changed my understanding of the country and improved my social skills. Even today, those social skills help me in navigating interaction with Global colleagues. However, most importantly, after so many sessions in 'Cinderella' Hotel, Aloo paratha became my favorite food item.

8. Any of your batch stories that make you smile in reminiscence?

Answer: We organized farewell party for our immediate seniors. We all came together and delivered a perfect function for seniors. Hope they remember it even today!

WHAT THE FOOD!!!

Wasp Crackers



Hey, are you thinking of wasps or crackers? Foodies say high five for crackers and nature lovers have the buzz of wasps around their mind. Why not think of both together? And by that you might be thinking of having a cracker as you relax sitting on a garden gazing over butterflies and wasps diligently gathering nectar from the blossoms, which is so much taking you to the imaginary world right now. Talking of imaginations, how about if that piece of almond or raisin on your crackers turns out to be a wasp? Psst! It stings hard as you think of it, doesn't it? This isn't any imagination; this is for real this time.

These crackers are very real and on sale in Nagano Prefecture, Japan. It's a senbei, which is a Japanese style of rice cracker that right now, has a lot of wasps added to it for flavour or wellbeing or something. We don't have the foggiest idea why we as of late had the joy of plunking down with a pack of wasp wafers, just to find that they really weren't as appalling as you would anticipate. Be that as it may, there are a few pockets to a great extent around the nation that have a custom of eating creepy crawly nourishments. The wasps utilized in these cracker *Vespulaflaviceps* or *Kurosuzumebachi* are cultivated in specific pieces of central Japan for human consumption. Their larvae specifically are said to be eaten with rice.

They taste very much like raisins but have a slightly acidic and bitter taste to them. In other words, they taste burnt, which makes sense since they were baked in a cracker. However, it doesn't taste that bad as you think. It certainly is a disgusting sensation to chomp down on something round and squishy and know that it must have been either a head or an abdomen, and when a wing or a leg gets stuck between cheek and gums, it wouldn't be the best inclination in the world.

A digger wasp lover group has teamed up with a local biscuit maker to create a unique digger wasp rice cracker. Digger wasps sting and paralyze other insects before eating them, but after the wasp-loving club members capture their prey, the bugs don't stand a chance. They're boiled and dried, then added to rice cracker mix. A hot iron cracker cutter stamps out the finished rounds which looks like the embedded dry fruits in a cracker.

According to certain sources, wasps contain the highest percentage of protein of any edible insect – a whopping 81 percent to be exact! For comparison purposes, an average steak contains just 20 percent. Now you know what to order if you're needing a protein boost. A senbei contains 147 kcal, 21g carbohydrates (59%), 6g fats (38%) and 1g (3%) protein. There could be enormous increase in the amount of protein that we can assimilate just by addition of protein rich wasps to the bland cracker. Besides there are other health benefits of wasps such as; they are packed with beneficial fats, vitamins, minerals, antioxidants and also a source of prebiotic fibre. They're animals we eat as a whole and their nutrients are more bio-available than livestock muscle tissue or wheat.

Indeed, it sounds appalling to bite down certain heads and tummy; however, this is the cutting edge wellspring of protein which can be benefited efficiently and in higher numbers. In the event that there is acknowledgment of such sound and sustainable source of protein, then our upcoming generation can sit and relax in the garden having these wasp crackers.

GAMES

Arrange the jumbled words using the clue given.

GNASAAL – An Italian dish. Type of wide, flat pasta.

ISSUH – Famous in Japan. Prepared from vine gared rice, with some sugar and salt.

YSATA – Originated in Indonesia. It is a grilled, seasoned and skewered meat with sauce.

DLALIAESUQ – Mexican dish. Tortilla that is filled with cheese.

ETETGUAB – Originated in France. It is a long thin loaf of bread.

RTEEPLZ – A German dish. Baked pastry made from dough that is shaped into a knot.

AOSAMD LASA – Indian dish. It is a crispy crepe made using fermented rice and lentil batter.

ANSWERS

1. Lasagna

4. Quesadilla

2. Sushi

5. Baguette

7. Masala Dosa

3. Satay

6. Pretzel

Photography



EDITORIAL

EDITOR-IN-CHIEF - PARTHI DESAI

COVER STORY - DR. SHEKHAR KADAM

FOOD INCORPORATED

AISHWARYA
SHEELA
BHARATHI

DESIGN TEAM

SIDDESH
PARTHI
SOUMYA V P
RAMYA
MUKTHA
VIBHUTI
NIKHIL
ANUSHA

INDUSTRY BUZZ AND FSSAI POLICY

ROHIT
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VIGNESH

CAREER CORNER

PULKIT
FLEMING
SOUMYA
RANJAN SAHU

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ANUSHA

GAMES

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