



# BTU REFLECTIONS

e-Newsletter



Volume : 2, Issue: 1 (April- 2023 to June- 2023 )

Quarterly Coverage

Bakery industry is one of the largest segments in the food processing sector in India. The bakery industry offers huge opportunities for growth, innovation, and job generation. This industry is separated into three categories, bread, biscuits, and cakes & pastries. The bakery market in India is likely to grow at a CAGR of 10.8% between 2023-2028 and is anticipated to reach a value of US\$ 21.2 Billion by 2028. As the second largest producer of biscuits after the USA, India is a key player internationally and with the entrepreneurial spirit of Indian companies and individuals it is one of the most sustainable sector, under job creation and income generation.

While there is a demand and appetite for bakery products in both urban and rural areas and bakery segment has increasingly matured to a great extent, recently. The industry is generally divided into organised and unorganised, with more than 2,000 organised or semi-organised bakeries and more than 1,000,000 unorganised bakeries. However, the Indian bakery industry faces certain challenges. Operational efficiency is a major issue in the industry, as is the lack of technology and skilled workers. Although there are obstacles which are causing losses, there has been a boom in entrepreneurial endeavors in the bakery industry. Home baking has always been a popular pursuit, but with new technological innovations individuals have been able monetize their efforts.

## SUMMER SPECIAL COURSES

The unit organized short duration training programmes on Bakery and value addition under Summer special courses namely Chat preparation, Value added milk and milk products, Fireless cooking, Home Baking, Baking course for school children, Ragi Processing and value addition, Refreshing juices in the month of April, further other

short courses on Value added jack fruits products, Value added products of Millets, Processing and preservation of Fruits and Vegetable, Diet and Nutritional Management for Diabetes, Special cakes, Eggless Bakery products and value addition to Spices were organized in the month May. The programmes were participated by 281 trainees including Entrepreneurs, women, youth, students, SHG members and Housewives.

**a) Chats preparation** - Chats preparation course for interested housewives and students was conducted for duration of 2 days, on 05.04.2023 and 06.04.2023 for 37 trainees (Male: 07 Female: 30). The trainees were given hands on training on preparation of various chats and different types of chutneys, Such as Bhelpuri, Masala puri, Papdi chat, Papdi, Panipuri, Dahibatapuri, Tomato/Vegetable Bhel, Corn chat etc.



**b) Value added Milk and Milk products**-The 3 days course on Milk and Milk products was conducted from 10.04.2023 to 12.04.2023 for 27 trainees (Male: 12 Female: 15). The trainees were given hands on training for preparation of milk products like Flavoured milk, Khoa, Gulab jamun, Peda, Paneer and Paneer based products, Mango shrikhand, Ice cream, Kalakhand, almond drink, and other Channa based products like Ras-malai, sandesh, Rasogolla, channapoda, etc.



**c) Value added Ragi products-**The 3 days course on Value added Ragi products were conducted from 17.04.2022 to 19.04.2022 for 19 members (Male: 07 Female: 12). Various Ragi based products like Ragi chakli, Ragi papad, Ragi malt, Ragi sari, Ragi Hurihittu, Ragi Laddu, Ragi dosa mix, Ragi Idly, Ragi shavige, Ragi Ambli mix were demonstrated during the programme

**d) Fireless cooking-**Fireless cooking course for interested housewives and students was conducted for duration of 2 days, on 20.04.2023 and 21.04.2023 for 07 trainees (Male: 00 Female: 07). The trainees were given hands on training on preparation of apple milk, dates smoothie, rusk chats, oats peanut butter balls, puffed rice peanut butter balls, Mixed Sprouts Salad or chat, Sweet corn Salad, Oats Smoothie, Fruity Oats Smoothie, Cheese Cake, Chocolate Mousse, Triple Mousse and Italian Salad.

**e) Home baking-**Home baking course for interested housewives and students was conducted for a duration of 3 days from 24.04.2022 to 26.04.2022 for 15 members (Male: 01 Female: 14). Hands on training on baked products like biscuits, breads, cakes, puff pastry & soup sticks, were given to the trainees.

**f) Baking for School children -** The 3 days course was conducted for the school children from 24.04.2022 to 26.04.2022 for 23 (Male: 06 Female: 17) participants. Hands on training were given on baked products like coconut cookies, sweet doughnut, coconut castles, pizza, sandwich and chocolate rich cake. Children were interested in baking process.



**g) Refreshing Juices-** Refreshing juices course for interested housewives and students was conducted for duration of 2 days, on 27.04.2022 and 28.04.2022 for 19 members (Male: 08 Female: 11). The trainees were given hands on training on preparation of raw mango panna, curds delight, happy smile, detox smoothie, pudina jal jeera, adios coffee, melon swing.



**h) Value added Jackfruit products-**The 3 days course on value added Jackfruits products was conducted from 03.05.2023 to 05.05.2023 for 13 trainees (Male: 00 Female: 13). The trainees were given hands on training on preparation of jackfruit papad, jackfruit mixture, jackfruit seeds cakes and Masala biscuits, jackfruit seeds payasam, jackfruit peda, jackfruit chips, jackfruit pakoda & vada, jackfruit squash, jackfruit jam, jackfruit halwa etc.

**i) Eggless Bakery products-**The 3 days training programme on Eggless bakery products was conducted from 08.05.2023 to 10.05.2023 for 11 trainees (Female: 11). Hands on training were imparted on Value added eggless products like biscuits, breads, cakes, puff pastry, strudel, Nippattu etc.

**j) Diet and Nutritional management for Diabetes**  
The 2 days course on Diet and Nutritional management for Diabetes was conducted on 11.05.2023 and 12.05.2023 for 15 members (Male: 02 Female: 13). A brief orientation was covered on topics such as importance of balanced diet for good nutrition and health, symptoms and complications of diabetes, tools in the management of diabetes, glycemic index of foods etc. Training cum method demonstration of low cost and low glycemic nutri-rich products like sprouted fenugreek salad, Nutri-flour mix; Steamed foods like fibre rich



nucchinunde, Millet beverage, Millet menthya soup were demonstrated. The trainees expressed their desire to incorporate all these recipes in their daily diets.

**k) Home Baking-**Home baking course for interested housewives was conducted for duration of 3 days from 17.05.2023 to 19.05.2023 for 09 members (Male: 00 Female: 09). Hands on training on baked products like biscuits, breads, cakes, puff pastry & soup sticks, were given to the trainees.

**l) Baking for School children -**The 3 days course was conducted for the school children from 17.05.2023 to 19.05.2023 for 20 children (Male: 03 Female: 17). Hands on training were given on baked products like coconut cookies, sweet doughnut, coconut castles, pizza, sandwich and chocolate rich cake. Children showed interest to learn the bakery products.

**m) Value added Millet products-**The value added millets product course was conducted for a period of 3 days from 22.05.2023 to 24.05.2023 for 14 trainees (Male: 02 Female: 12). The training included importance of millets in daily diet and preparation of value-added millet products like millet rice, millet payasa, idli, dosa, millets magic drink, millet curd rice, millet dosa mix, laddu, strips, millet beverage, etc.

**n) Preparation of Spice mixes-** The 2 days training programme on value added Spice powders was conducted on 25.05.2023 and 26.05.2023 for 33 participants (Male: 03 Female: 30). Health benefits of Spices was explained to the trainees followed by method demonstrations of Spice powders like Bisibele bath powder, Vangi bath powder, Rasam powder, Chat masala, Garam masala, Sambar powder, pulao powder etc.



**o) Special cakes-**The 3 days course on special cakes was conducted from 29.05.2023 to 31.05.2023 for 19 participants (Male: 01 Female: 18). The trainees were exposed to the preparation of different varieties of special cakes such as carrot cake, Butter scotch cake, Rich plum cake, Death by chocolate cake, Coffee walnut cake, Pineapple pastry and Cheese cake along with the decorations.

### SHORT COURSES

Various 2 to 3 days short courses such as Chat preparation, Value added Milk and Milk products and Value added Amla products were conducted for the benefit of house wives, teenagers and also working women during the month of June and 50 participants were benefited

**a) Chat preparation-**Chats preparation course for interested housewives and students was conducted for duration of 2 days on 13.06.2023 and 14.06.2023 for 22 trainees (Male: 02 Female: 20). The trainees were given hands on training on preparation of various chats and Different types of chutneys such as Bhelpuri, Masala puri, Papdi chat, Papdi, Panipuri, Dahibatapuri, Tomato/Vegetable Bhel, Corn chat.



**b) Value added Milk and Milk products-**The 3 days course on Milk and Milk products was conducted from 20.06.2023 to 22.06.2023 for 16 trainees (Male: 02 Female: 14). The trainees were given hands on training for preparation of milk products like Flavoured milk, Khoa, Gulab jamun, Peda, Paneer and Paneer based products, Mango shrikhand, Ice cream, Kalakhand, almond drink, Masala lassi, and other Channa based products like Ras-malai, sandesh, Rasogolla, channapoda, etc.



**c) Value added Amla products**-Value added Amla products course was conducted for interested housewives and youths for duration of 2 days, on 27.06.2023 and 28.06.2023 for 12 trainees (Male: 00 Female: 12). Hands on training was imparted on Value added Amla products like Amla jam, Amla Murabba, Amla squash, Amla punch, Amla chutney, Amla pickle, etc. The nutritional and health benefits of Amla were explained to the trainees.



## SPECIAL EVENTS

### Celebration of World Milk Day

To recognize the importance of milk as a global food, since from 2001, every year the benefits of milk and dairy products are being promoted globally as dairy supports the livelihood of billion people besides providing good nutrition with complete quality protein. World Milk Day-2023 portrayed how dairy sector increased in production as well as providing nutritious food and livelihoods. Hence to draw the attention about environmental, nutritional and societal impacts of the dairy sector, the BTU celebrated the World Milk Day on 01.06.2023.

Dr. Shilpashree, B. G., Assistant Professor, Dairy Chemistry, Dairy Science College, Bangalore addressed the participants about the importance of this year's milk day celebration, nutrient content of milk and other dairy products, health benefits of A1 and A2 milk, quantity of dairy products to be consumed regularly according to RDA, ICMR and



importance of clean milk production. Mrs. A. Ashwini, Assistant professor stressed on the importance of celebration of World Milk Day being celebrated every year and emphasised the uses of milk and byproducts as ingredient in bakery and confectionary industry. Around 35 participants were benefited.

### Celebration of World Environment Day

World Environment Day is being celebrated every year on June 5<sup>th</sup> to increase the awareness on maintenance of the environment and overall support for the protection of our planet. It is celebrated by millions of people across the world. The unit celebrated World Environment Day on 05.06.2023 with the theme "Beat Plastic Pollution" as the whole world is being inundated by plastic, so as to create awareness among the public that people's actions on plastic pollution matters.

Dr. Savita S. Manganavar, Professor and Coordinator, BTU, addressed the participants about the importance of celebration of World Environment Day and emphasised that more than 400 million tonnes of plastic is produced every year, half of which is designed to be used only once. Hence, it is our responsibility to control the plastic pollution so as to save the Mother Earth from any sort of land and water pollution and to handover clean and pollution free environment for future generations and also highlighted on the role of parents to guide the children for segregation of wastes and dumping of the plastic wastes separately so that it could be recycled and reused. Mrs. A. Ashwini, Assistant professor stressed the participants to use eco-friendly packaging materials and to minimise the use of single use plastics. Around 35 participants were benefited.





## Celebration of World Food safety Day

World Food Safety Day is being celebrated annually on 7<sup>th</sup> June, with the purpose to promote awareness and action on food safety. The unit took an initiative to draw the attention to food safety and standards among the participants and celebrated fifth World Food Safety Day on 07.06.2023 by organising a guest lecture on “Microbiological safety of Food products”.

Dr. Suvarna V. Chavannavar, Professor and Head, Department of Agricultural Microbiology, UAS, Bangalore addressed the participants regarding safety practices as Food borne diseases affect 1 in 10 people worldwide after eating contaminated food and around 4,20,000 die every year due to food borne illness. Thus, knowledge on food safety and safe handling of foods by following the food standards help to consume safe foods and thus save lives. She also discussed the hazards that could occur during the food handling and measures to be taken to provide safe foods by following Good Manufacturing Practices. Mrs. A. Ashwini, Assistant professor stressed on the importance of celebration of World Food Safety Day -2023 with the theme “Food Standards Save Lives” and requested the participants to protect themselves from the risks of contaminated food and water. Around 40 participants were benefitted.



## Celebration of International Day of Yoga

An invaluable gift of ancient Indian tradition, Yoga has emerged as one of the most trusted means to boost physical and mental well-being. Recognizing its universal appeal, on 11 December 2014, the United Nations proclaimed 21<sup>st</sup> June as the International Day of Yoga. Since then, every year on June 21<sup>st</sup> International Yoga Day is being celebrated.

Dr. Savita S. Manganavar, Professor and Coordinator, Bakery and Value Addition Centre,

emphasized the benefits of Yoga and importance of Meditation. A practical session on warm up, Asanas, breathing exercise and meditation was demonstrated. Surya Namaskar and 12 different postures that would benefit the whole body was discussed and also suggested the participants to practice Yoga and Meditation on daily basis. Mrs. A. Ashwini, Assistant professor, emphasized that Yoga is one of the best and oldest techniques to release stress which focus on physical, mental and spiritual well-being. Dr. Prakruthi. N. Raj, Assistant professor, revised the benefits of practicing asanas and meditation techniques and demonstrated Surya namaskara for the participants and the staff of the unit. Around 45 participants were benefitted.



## WORKSHOPS/ORIENTATION PROGRAMS

### Workshop on “Approaches towards Innovative Microenterprises in Bakery Industry”

A workshop on “Approaches towards Innovative Micro enterprises in Bakery Industry” was jointly organized by Bio-NEST, Agri Innovation Center and Bakery and Value Addition Centre, UAS, Bangalore on 2<sup>nd</sup> June 2023 at Agri Innovation Center (RIOF Building), GKVK, Bengaluru. Dr. S. V. Suresha, Vice Chancellor UAS-B inaugurated the programme and in the inaugural address he stressed upon various innovative approaches for income generation in Bakery sector and explained with individual case studies and also highlighted the potentials of micro entrepreneurship in bakery industry. Dr. H. C. Prakasha Dean (PGS) Chaired the inaugural session. Dr. V. L. Madhuprasad, Director of Extension, Dr. K. M. Harinikumar, Coordinator, Bio-NEST, AIC and Dr. Veena S Anil, Co-coordinator, Bio-NEST, AIC and Dr. Savita S. Manganavar Coordinator, Bakery and Value Addition Centre and Dr. Madhusmitha sahoo, Head, Food Regulatory Affairs, MTR foods private limited participated in the inaugural session.



Technical sessions were organized for the benefit of the participants which included the emerging entrepreneurs, startups, trainees and students. Dr. Savita S Manganavar, Professor and coordinator, Bakery and Value Addition Centre, delivered a lecture on “Opportunities and challenges in Bakery Industry” where she highlighted the present global status of bakery industry, activities of BTU and focused on opportunities and ways to overcome the challenges of the industry and Dr. Madhusmitha Sahoo, Head, Food Regulatory Affairs, MTR foods private limited delivered a lecture on “Compliance requirements for product innovation - from Concept to post launch stage” where she focused on the importance of regulatory requirements and FSSAI for food business. Dr. Kalpana. B, Professor, Staff Training Unit, highlighted information on the Technologies of Value added Jackfruit products available for commercialization developed by the scientists of the university. Dr. Veena S Anil, Professor and Co-ordinator, Bio-NEST, Agri Innovation Center, UASB briefed about the Thematic areas and facilities available at Agri Innovation Center. Around 100 participants were benefitted by the workshop and emerging bakery entrepreneurs also displayed and sold their innovative bakery products and simple tools related to bakery industry.



### Orientation program for KVK Scientists

The unit had organized an orientation program on Bakery and value addition on 21.06.2023 for 48 KVK Heads from different KVKs of ATARI Zone XI as a part of KVKs-Zonal Workshop 2023, coordinated by ICAR-ATARI and UASB. During this visit, various millet based bakery products and other value added products from nutri-cereals were exhibited. A lecture on “Opportunities

of starting Bakery as an enterprise and activities of Bakery Training Unit” was delivered. The Scientist interacted with staff and preparation of decorated cake was demonstrated.



### EXHIBITIONS

#### “Novel bakery products - Exhibition cum sale”

The Unit had organized an event on "Novel bakery Products - Exhibition cum sale" by 14 weeks Bakery Technology students (68<sup>th</sup> Batch), which was scheduled on 16.05.2023, at College of Agriculture, North block corridor, UAS, Bangalore as a part of fourteen weeks certificate course on Bakery Technology to ensure overall exposure of preparation, pricing and marketing of bakery products. The programme was inaugurated by Dr. S. V. Suresha, Hon'ble Vice Chancellor, UAS, Bangalore by pouring honey to the cake pot and in his inaugural address he highlighted about the importance of innovations in developing novel bakery products to meet the trend of increasing demand and also encouraged the trainees to become a successful entrepreneur by using various marketing and communication skills. Dr. N. B. Prakash, Dean (Agri.), Dr. Basave Gowda, Registrar, Dr. H. C. Prakasha, Dean (PGS.), Dr. Madhu Prasad, Director of Extension, Dr. K. B. Umesh, Director of Research, Dr. K.M, Harini Kumar, Administrative officer, Shri. D. Krishna Murthy, Estate Officer, Dr. V. Palanimuthu, Special officer, CoAE and other officials graced the occasion. The dignitaries, teaching and non-teaching staff interacted with the trainees and congratulated for their active involvement. The trainees expressed that they are confident of handling and preparation of the bakery products as a business on their own. Forty five participants



exhibited their unique bakery products such as Lamination cake, Red velvet delight, Mango mousse cake, Rasmalai jar cake, Fruity pulpy cake, Chocolate brownie, Walnut brownie, Chocolate marble cake, Choco cheese cupcake, cake pops, Beetroot cake, Blueberry honey cake, Choco butter cookies, Dhabelli, Spice masala biscuits, Jowar biscuits, Peanut jaggery biscuits, Choco – vanilla biscuits, Whole wheat jaggery biscuits, Panipuri biscuits, Gulkan rose biscuits, Hidden cheese bread, Onion cheese bake, Swiss bun, Veg pizza, Banana date, Bread roll, Veg cheese croissants, veg burger., etc. More than 80 novel products and around 40 types of special cakes were displayed and sold by the participants. Around Rs 85,000/- income was generated among the students and more than 500 visitors viewed this exhibition and encouraged the participants. The students gained a practical experience of skills related to preparation and selling of their products, there by increased their self-confidence. Also, the certificates were distributed to the participants (67<sup>th</sup> Batch) for completing the 14 weeks certificate course on Bakery Technology at BTU.

Suresha, Vice Chancellor, UAS, Bangalore and other Guests visited the stall. More than 2000 participants including progressive farmers had participated and were benefitted.



### Exhibition at ISEE National Seminar 2023

The Bakery and Value addition Centre had participated in ISEE National Seminar on "Evolving Extension Science towards Secondary Agriculture for Sustainable Development" from 22<sup>nd</sup>-24<sup>th</sup> June 2023 at Dr. Babu Rajendra Prasad International Convention Center, UAS, GKVK, Bangalore. During the Inaugural Programme, Sushri, Shobha Karandlaji, Hon'ble Minsiter of State for Agriculture and Farmers Welfare, GoI, New Delhi, along with other chief guests and Hon'ble Vice chancellor, UAS, Bangalore inaugurated Exhibition stalls by cutting a Millet based cake. In the exhibition stall, various millet based bakery products and other value added products were displayed to create awareness about EDP and income generation among the participants. More than 1000 participants including Scientists, Students, Scholars, young entrepreneurs visited the stall and interacted with the Scientists.



### Exhibition at International Seed Day

University of Agricultural Science, Bangalore in collaboration with Department of Agriculture, Govt. of Karnataka, had organized International Seed Day on 8<sup>th</sup> June 2023 at Babu Rajendra Prasad International convention centre, GKVK, Bangalore. The Bakery and Value addition Centre had participated in this event and exhibited various millet based bakery products and other value added products. Shri. N. Chaluvarya Swamy, Hon'ble Agriculture Minister, GoK, Dr. S. V.





## LONG DURATION COURSES

### Four weeks Baking Course

The unit had organized 3 training programmes of 4 weeks Baking course. The trainees were given Hands on training for product preparation and theory classes were conducted on selected topics such as selection of raw material, Food safety and hygiene practices, tips for improving the qualities of biscuits and cakes and FSSAI licensing / Registration. The trainees were happy with the course content and satisfied with the amount of opportunity provided for them to practice and expressed their willingness to enroll for the other upcoming short courses and other long term courses offered by the unit. A total of 77 participants were benefited by this course.



### Fourteen Weeks Certificate Course in Baking Technology

Fourteen weeks certificate course is being organized by the unit and as a part of which special guest lectures by successful entrepreneurs, retired officers and subject matter specialists on topics such as Fondant preparation and its designing techniques, Process of FSSAI Registration and licensing, Food adulteration and demonstration on identification of adulterants in food products, Wet and dry processing equipments used in food industries, Packaging Technologies and Labeling techniques in Food and Bakery Industry, State/Central Government Schemes related to food sectors, Importance of Nutrition and physical activity for healthy life and Milk – As Functional and nutritional ingredient in bakery industry were covered for 69<sup>th</sup> batch.

The interview for 70<sup>th</sup> batch of 14 weeks certificate course in Baking Technology was held on 01.06.2023 to select the candidates and the course commenced on the same day. A total of 31 participants (Male: 14 Female: 17) enrolled and the course is in progress.

## ACHIEVEMENT

### Launching of e-Newsletter of Bakery and Value addition Centre

An e-Newsletter of Bakery and Value addition Centre was launched by Shri. N. Chaluvarya Swamy, Hon'ble Agriculture Minister, GoK, Dr. S. V. Suresha, Vice Chancellor, UAS, Bangalore and other Dignitaries, during Valedictory function of ISEE National Seminar on "Evolving Extension Science towards Secondary Agriculture for Sustainable Development" on 24.06.2023 at Dr. BabuRajendra Prasad International Convention Center, UAS, GKVK, Bangalore. This e-Newsletter provides information about the activities of BTU, carried out in the form of events, awareness programs, research activities, training programs etc. which could be useful to the Scientists, Research scholars, Food Technologists, Students and other entrepreneurs engaged in industries with respect to food processing and value addition.







## ENTREPRENEURS DEVELOPED BY BTU

Name	Kalpasree Mallesh
Address and Contact	Bengaluru 9740210281
Qualification	B .Com.
Occupation	Entrepreneur
Name of the industry	Zoet – The house of Healthy eggless Baking
Investment amount	1.5 lakh
Type of products	Healthy eggless cakes, Cake Decorations, puffs, Doughnuts, Eco friendly Specialized cakes and Pizza
Source of finance	Self Finance and Hand loan
Income (Rs.)	50,000 to 60,000 /month
Employees working (Nos)	2

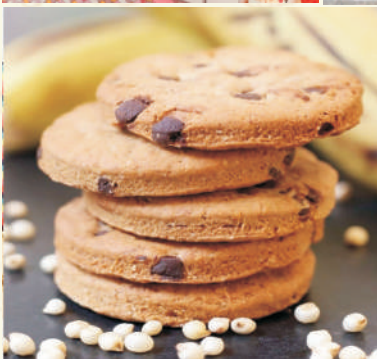


Name	Manjula Dodamani
Address and Contact	Hebbal, Kempapura, Bengaluru 9071810789
Qualification	BSc.
Occupation	Entrepreneur
Name of the industry	Bakers Junction
Investment amount	25 lakh
Type of products	Cookies, Cakes, Chocolates, Cake Decorations, Bakery raw materials in small quantities and Small Baking equipments
Source of finance	Self Finance and Hand loan
Income (Rs.)	50,000 to 80,000 /month
Employees working (Nos)	4





Name	Suguna N Shoba
Address and Contact	601, 20th A cross, A - block, Radha Krishna Kalyanamantap road, Bangalore 8088163204
Qualification	B.S.C ( in computers)
Occupation	House wife
Name of the industry	Queen's Saga
Investment amount	20 lakh
Type of products	Personalized Cookies and Cakes, Designer cakes, Bakery and confectionery
Source of finance	Self Finance and Hand loan
Income (Rs.)	1 lakh/month
Employees working (Nos)	3



## Editorial Committee

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