MANIPAL
ACADEMY of HIGHER EDUCATION
(Institution of Eminence Deemed to be University)

# Report of Zero Hunger


## SDG 2

## Campus food management

The MAHE campus food facilities are an organized approach that pursues to decrease food waste and its allied impacts over the whole life cycle. Procurement from various sources, pre-preparations, cooking, and consumption, and ending with choices on final disposal, follow a sustainable way for managing food wastage.

Students on the MAHE campus receive knowledge about different approaches to control or reduce food wastage through various awareness programs throughout the year. The MAHE students have been able to control the on-campus food waste by applying their knowledge of food waste management through implementing the five-pronged action plan of Refuse, Reduce, Reuse, Repurpose, and Recycle.

The food service facilities of MAHE adhere to a method guaranteed to maximize food utilization and reduce food waste. Food service establishments usually use seasonal, locally sourced ingredients with reduced food miles. Putting up signs in the dining halls to let students know what belongs and don't belong in the food waste receptacle. The raw vegetable waste that will be composted is segregated from the other debris. Both biodegradable and degradable waste is carefully sorted to ensure that the naturally biodegradable trash may be utilized as compost for the vegetable garden. Two tanks turn trash into compost and nutrients for our vegetable garden, including vegetable peels and extra trimmings.

All the MAHE food service centres weigh the cooked food waste after every meal, and the waste amount is displayed on the notice board to create awareness among students of how much is wasted in a day and which meal has the most waste. Unserved cooked food is stored in refrigerators in highly hygienic conditions for further reuse. Cooked waste food from food bins is being sent to cooked food cold storage to supply the local piggery farms.

## Annadaan (The Festival of Giving)

Under the community child support policy to solve classroom hunger which affects children's ability to learn and grow, MAHE adopted local primary schools to equip them with various

resources, which eventually helped schools to serve nutritious, healthy meals to the underprivileged.


To address childhood malnutrition, MAHE provides midday meals to more than 200 underprivileged students from different elementary schools in the locality. As a part of Daan Utsav celebrated by the MAHE Voluntary Service Organization (VSO), a community outreach organization across MAHE colleges, conducted Annadaan on 1st October 2021 at Kadiyali School, Kadiyali, Udupi.

## Student Hunger

The food facilities at Manipal Academy of Higher Education are run in collaboration with SPADE Integrated Services Limited and Chef on wheels. It is one of a kind catering service that offers high-quality & cost-effective service. Our prime focus is to provide healthy and delicious food for everyone, anytime, anywhere. We believe that food served with warmth and the right attitude will leave a lasting impression in the minds of the people being served. Our priority is to maintain a standard operating procedure, uniformly practised across various sites with a high emphasis on following food safety protocols and compliance with all statutory norms.

Our expertise in world cuisine and a dynamic delivery team comprising of specialized chefs and nutritionists have been the cornerstone of our success in delivering high-quality food services over the years. We also provide end-to-end catering solutions from equipment selection to kitchen set-up and efficient operationalization. Most importantly any kind of harmful food additives is not used in food preparation.

Chef on Wheels is certified with ISO 14001:2004, ISO 22000:2005, and OHSAS 18001:2007 and proud member of the ISSA, IFMA and Safety Council of India.

## Healthy Food

At Manipal Academy of Higher Education (MAHE), we believe in meeting the requirements of developing teens while remaining environmentally responsible. As a result, it is vital to give children appetizing cuisine without sacrificing the nutritious value of the food. Breakfast, lunch, high tea, and supper are served in the MAHE food courts four times a day. All the meals are carefully designed and diverse.

Meals are inspired by numerous cuisines from across the world. They are made with locally grown and freshly procured vegetables. The planning is precise to minimize waste. Students can contribute to the food planning process by developing creative menus.

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## Mobile platform to assist Farmers

The University of New Brunswick's J Herbert Smith Centre for Technology Management and Entrepreneurship, in partnership with M-GoK Bioincubator of Manipal Academy of Higher Education (Manipal, India), announced the winners of the Global Technology Solutions (GTS) program during the final pitch event, which took place virtually on April 23.

GTS is a unique four-month program that unites students from the Manipal Academy and UNB. The program offers students a global perspective as they work to solve some of today's toughest technology challenges. The program's first cohort gathered 10 students from MAHE and five from UNB from a wide range of disciplines spanning medicine, dentistry, entrepreneurship, computer science, mechanical engineering and biotechnology.


Students worked in teams to develop innovative solutions to problems within the food security, health innovation, mobility and transportation, potable water, or renewable energy sectors. Farmers App, a mobile platform that will assist farmers in getting their products to more profitable markets, won the "Greatest Social Impact" award.

## DST grant Project on Smart Aquaculture

Manipal Academy of Higher Education (MAHE) is creating a scientific and technical solutions to assist fish farmers in increasing their fish production with the aid of DST. This entails identifying key locations and creating a favourable ecology for fish development, which increases productivity and hence the income of fish farmers while also bridging the demand-supply gap and ensuring food security for the region.

Cages are installed in two places, one in Moodukudru and the other in Manipal's Swarna backwaters, based on their appropriateness. The cages have been seeded with fish, and the environment within the cage is being monitored by a smart system.

## Seva

Society, Environment, Values, and Attitudes (SEVA ) is a 2-credit course that is entirely live project based.TAPMI celebrates local entrepreneurs, arts, crafts, and culture with business solutions and inputs through the flagship SEVA program. The course is modeled on several similar courses across top b-Schools across India and other parts of the world as well as modelled around SEVA 2018. In India, the course is offered as a standalone elective or as part of a larger stream of courses connected to sustainability, responsibility &/or managerial ethics.

The main objectives are to develop social actors and help them to develop the skills they need to be empathetic, ethical actors who will positively impact their own lives, their communities, their companies, and in their limited capacities, their countries, and the world, now and throughout their lives. These projects aim to eliminate the blockades found by some individuals, social groups, and social ventures to participate in social innovation, activities. To develop concrete managerial solutions to different business pains of SMMEs, and social entrepreneurs that can support inclusive growth, job creation, and company profitability.


The entire TAPMI Master of Business Administration batch of almost 500 students works with organizations such as Nammaangadi, Kadike Trust, Anti-Pollution Drive Mangalore, Navodaya, CraftsMantra, Namma Shyli, Mattu Gulla Association, and other local entrepreneurs to help solve their management hurdles. SEVA spans from August to April every year and culminates in the annual celebration called SEVA Jatre. The “Seva Jatre” is fair to celebrate the efforts of the students. It is an opportunity to showcase the work done by the students using non-traditional means of communication, as opposed to a PowerPoint presentation. SEVA Projects will formally be presented in January, in the presence of stakeholders, the media, and other prominent persons. This will be a two-day event with student presentations and stakeholder interaction/ meeting - SEVA Jatre (to TAPMI, group activity) – This is a creative activity with a cultural dimension wherein students can showcase their academic learning from SEVA for the benefit of the whole TAPMI community. Students must demonstrate their analytical insights and understandings developed during the SEVA over a period of two days. Students will also get the opportunity to discuss their projects and seek inputs and advice from various field experts who will be invited to SEVA Jatre. These presentations are thoroughly reviewed by the jury consisting of expert faculty from various domains and backgrounds, followed by the award ceremony on JATRE day. The top three projects will be declared based on the judgment of the panel on SEVA JATRE. Commendation certificates & possible prizes will be conferred during the ceremony. Additionally, the Director will also choose 3 additional projects for a personal recommendation for stellar performance. These projects will constitute our showcase projects to UNPRME, UNGC, for other case competitions/challenges, brochures, videos, websites etc.

## Helping local farmers and sustainability

The Department of Plant Sciences of the Manipal School of Life Sciences (MSLS), MAHE Manipal, is engaged in activities helping local farmers and preserving biodiversity through research interventions. One of the significant works being carried out by the department and the school involves assisting farmers in the nearby Mattu village of Udupi district in Karnataka. They grow a niche brinjal crop with its own geographical index tag, known as the Mattu Gulla, Solanum melongena L. var. Mattu Gulla. This crop has issues related to germination and infection by nematodes during a new season. The germination issue could potentially lead to a loss of yield and thus affect the region's economy, causing loss and stress to the families reliant on this crop. The school lent a helping hand through the efforts of Dr. A Muthusamy (Head, Department of Plant Sciences), Dr. KK Mahato (Head, Department of Biophysics), and Dr. K Satyamoorthy (then Director, MSLS) and their team of researchers. They used low-level radiation to enhance the plant's seed germination potential without extraneous changes. These seeds showed enhanced growth and yield potential and were robust in germination. Since then, through support from government funding agencies and local farmers, this approach has been further researched to contribute to the local farming population and broader scientific knowledge. The team also helped identify nematode infection in the roots of Mattu Gulla and suggested methods to prevent nematode infection. There is also a focus on understanding issues related to salinity, which affects this crop. Efforts are being made to overcome certain aspects of this stress to help improve plant growth. Through the subsequent years, the researchers at MSLS and the farmers at Mattu have had a synergistic relationship with the faculty members providing necessary scientific inputs to overcome the challenges faced by the farmers.

The department also focuses on preserving biodiversity by characterizing critical secondary metabolites from unique species in this region, such as the orchid Dendrobium, with its ability to produce metabolites of medicinal importance, such as moscatilin. Another focus area of the department at MSLS is the characterization of metabolites in the plant Withania somnifera L, which has widespread use in Ayurveda and other traditional medicines. Further, the team has also made efforts, using advanced techniques, to identify and differentiate nine species of the Phyllanthus plant used in treating human diseases such as jaundice, diabetes, and cancer, to help ensure that the correct species is used in preparation.

## Study of Mattu Gulla

A team of 14 students from Manipal International University came to study various techniques adopted in producing and marketing accredited to Mattu Gulla (Green Aubergine). Professor

Dr. Harish Joshi provided all the details to the visiting team about the farming and marketing techniques. He also enlightened the team about various problems faced by the farmers in this region. They visited nearby fields to study the problems and other details in a live manner and enlightened the problems faced by the farmers. Manipal Institute of management Dr. Suhan Mendon, Professor Laila of Malaysia, The Chief Secretary Lakshman Mattu, and The President of the Mattu Gulla Producer association Mr. Dayananda Bangera accompanied the study team.

ಮಟ್ಟು: ಮಟ್ಟುಗುಳ್ಳ ಬೆಳೆ ಅಧ್ಯಯನಕ್ಕಾಗಿ ಮಲೇಷ್ಯಾದ ವಿದ್ಯಾರ್ಥಿಗಳ ತಂಡ ಆಗಮನ

ಕಟಪಾಡಿ, ಡಿ.12: ಜಿ.ಐ. ಮಾನ್ಯತೆಯನ್ನು ಪಡೆದಿರುವ ಮಟ್ಟುಗುಳ್ಳದ ಬೆಳೆಗಾರಿಕೆ, ಮಾರುಕಟ್ಟೆ ಬೆಳೆಗಾರರ ಬಗ್ಗೆ ಅಧ್ಯಯನ ನಡೆಸಲು ಮಲೇಷ್ಯಾದಲ್ಲಿನ ಮಣಿಪಾಲ ಇಂಟರ್‌ನ್ಯಾಷನಲ್ ಯುನಿವರ್ಸಿಟಿಯ 14 ವಿದ್ಯಾರ್ಥಿಗಳ ತಂಡವು ಮಟ್ಟು ಗುಳ್ಳ ಬೆಳೆಯುವ ಪ್ರದೇಶಕ್ಕೆ ಆಗಮಿಸಿ ಮಾಹಿತಿ ಕಲೆ ಹಾಕಿ ಅಧ್ಯಯನ ನಡೆಸಿತು

ಪ್ರೊ। ಡಾ। ಹರೀಶ್ ಜೋಷಿ ಅವರು ಅಧ್ಯಯನ ತಂಡಕ್ಕೆ ಮಟ್ಟುಗುಳ್ಳದ ಬೆಳೆಗಾರಿಕೆ, ಮಾರುಕಟ್ಟೆ ಜಿ.ಐ, ಮಾನ್ಯತೆಯ ಬಗ್ಗೆ ಮಾಹಿತಿಯನ್ನು ನೀಡಿದ್ದು, ಮಟ್ಟುಗುಳ್ಳ ಬೆಳೆಗಾರರ ಸಂಕಷ್ಟಗಳನ್ನೂ ವಿವರಿಸಿದರು. ಮಟ್ಟುಗುಳ್ಳ ಬೆಳೆಯ ಗದ್ದೆಗಳಿಗೆ ತೆರಳಿ ಬೆಳೆಯನ್ನು ಬೆಳೆಯುವ ಬಗ್ಗೆ ಕ್ಷೇತ್ರ ಕ್ಷೇತ್ರದಲ್ಲಿ ಪ್ರಾತ್ಯಕ್ಷಿಕೆಯ ಮೂಲಕ ಅಧ್ಯಯನ ನಡೆಸಿದರು ಮಟ್ಟುಗುಳ್ಳ ಬೆಳೆಗಾರರ ಸಂಘದ ಅಧ್ಯಕ್ಷ ದಯಾನಂದ ಬಂಗೇರ, ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿ ಲಕ್ಷ್ಮಣ ಮಟ್ಟು, ಮಣಿಪಾಲ ಇನ್ ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಮ್ಯಾನೇಜ್‌ಮೆಂಟ್‌ನ ಡಾ। ಸುಹಾನ್ ಮೆಂಡನ್, ಮಲೇಷ್ಯಾದ ಪ್ರೋ।ಲೈಲಾ ಉಪಸ್ಥಿತರಿದ್ದರು

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ಉದಯವಾಣಿ

ಅಧ್ಯಯನಕ್ಕಾಗಿ ಗದ್ದೆಗಿಳಿದ ಮಾಹೆ ವಿದ್ಯಾರ್ಥಿಗಳು

ಕುತೂಹಲಕಾರಿ ಅಂಶ

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A group of interested students visited the fields nearby to Katapady to study the marketing specialization of Mattu Gulla. The study team comprised of MAHE's centre for consultancy training corporate interface department of Commerce were included. During the visit, the students entered the fields along with their guides consulted the farmers about the GI accreditation, export markets, rural markets, branding, grading, marketing strategies, seed production, sowing technologies, preparation of saplings, grafting, pricing, setting the prices for the markets, promotion, labelling, cultural heritage, all of these were included as a part of the study package. The team included the students from the Netherlands, BBA in marketing, B. Com, B.Sc final year students were among the study team. The team was led by Dr. Vikram Baliga, Ph.D. in Mattu Gulla Studies, Praveen Kumar, Producers association head Joseph Monteiro accompanied the team.

## Sustainable Ethical Sourcing

Food is the soul of life and the foundation of our cultures and communities. It can be an influential resource to bring people together to grow, nurture and sustain the planet. It is high time we focus on how we grow, share and consume food on a daily basis.

If done in a thoughtful manner, local agriculture, forestry and fisheries can provide us with abundance of nutritious food for all and can also help in generating decent incomes for local farmers while supporting sustainable development.

Welcomgroup Graduate School of Hotel Administration (WGSHA) is taking up many such initiatives to promote Sustainable Ethical Sourcing and to encourage and support local farmers and fisheries. Sustainable sourcing is a method of selecting materials and ingredients, products and services from the local farmers and fishermen in a sustainable way. By practicing

sustainable resourcing, the organization directly unites social; ethical and environmental factors into selecting their vendors and distributers.

One among the many initiatives taken up by WGSHA are the weekly Paak Paryatan tours where in the students visit the local markets such as the ADI UDUPI MARKET and MALPE FISH HARBOUR, interact with the local farmers on native fruits and vegetables, locally available fishes and focus on creating recipes that are made with indigenous ingredients available in a radius of 30km.

Ingredients like BASALE SOPPU (also known as Mangalore spinach) , Vetrilai-valli kodi , locally grown ash gourd and jackfruit have seen their usage in dishes restricted to a specific area and it causes a direct impact on the livelihood of the farmers that are producing them.

Purchasing from small farmers prevents ownership from forming in agricultural markets and supports socioeconomic equality. When we source our food from local farms, our meals are fresher, healthier, and less transportation is required, resulting in fewer greenhouse gas emissions. Negotiating and purchasing from our local community also helps us support our local farmers and fishermen who want to produce healthy and sustainable food.

Dedicating special menus and food festivals to such indigenous ingredients helps the students in not only practicing ethical sustainable sourcing but also help and encourage the local farmers and fishermen in generating a notable price for the local produce.

## Technical Help to Local Farmers

The University (Manipal Academy of Higher Education) is represented by Centre for Consultancy Training and Corporate Interface (CCTCI), Department of Commerce. The Centre closely works with the community of farmers in Mattu village who grow Mattu Brinjal, a Community based Enterprise (CBE) with a GI tag. After undertaking a survey in the local area of Mattu village, it is observed that the local farmers lack knowledge in advanced technical know-how to increase production capabilities, create market extensions and develop market linkages to overcome the problem of distress sale. CCTCI shares the findings of the research conducted to the local farmers and also liaises closely with government organizations engaged in agriculture development, Non-governmental organizations and agriculture cooperative societies to promote Mattu Brinjal in particular and agriculture in general.


MAHE plays the role of a Producer Organization Promoting Institutions (POPIs) and provides support in creating market linkages, facilitate market extension and create producer cooperative societies with the objective of increasing sales. Majority of the farmers of Mattu village are small and marginal farmers who are posed with the challenge of resorting to distress sale. The overall mission is promoted by Agriculture Development Agencies such as National Bank for Agriculture and Rural Development aimed at promoting local agriculture and help farmers come of hunger and poverty.