



SDG 2: Zero Hunger

END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

Matters related to food, especially food security and nutrition of the community and students, have been the key focus points of the IITGN. Through organic farming, agricultural-food-based research, technology and innovation and promoting healthy eating practices, the institute aims to achieve its goals.

Research

Like the last assessment year, this year too, the IITGN was involved in Several mixed methods research projects, however, with promising progress in each of the projects. Works including social determinants of undernutrition in India, take-home ration services of integrated child services Scheme, and being a nodal institutions-identified by the Food Safety and Standards Authority of India (FSSAI) for NetSCoFAN (Network for Scientific Co-operation for Food Safety and Applied Nutrition). Some of the research-related works are mentioned below along with the agency and progress-

- Catalysing the National Nutrition Mission through innovative young minds: A formative study to capture key learnings-The India Nutrition Initiative, NewDelhi. In October 2020, the working team published the report: “SWASTH BHARAT PRERAKS Catalyzing POSHAN Abhiyaan through Innovative Young Minds: A formative study to capture key learnings”. The report highlights the findings of a formative study providing insights into how the SBP (Swachh Bharat Prerak) Programme contributes to the implementation of the POSHAN Abhiyaan.
- Network for Scientific Cooperation for Food Safety and Applied Nutrition: FSSAI. IITGN continues to be a part of this network, which helps the Authority to build and promote scientific co-operation, exchange of information, development and implementation of joint projects, and exchange of expertise and best practices in the area of food safety and nutrition.
- Reusable and field-deployable nano bio-catalysts for detection of pesticides and herbicides: Impacting Research Innovation and Technology IMPRINT. As discussed in last year’s report, the team has developed a field-deployable reusable prototype approach capable of colorimetric detection of the most widely used herbicides at sub-ppm levels”.The team has designed and developed a reusable magnetic nanoparticle with an immobilised enzyme for a simple colorimetric assessment of glyphosate. Glyphosate is the active component in RoundUp, the most widely used herbicide in the world. Further, the team have now firmly validated the ability of our

immobilised laccase to not only detect but provide a quantitatively accurate estimation of the amount of glyphosate present in samples. Also, field trials of the strategy adopted are in full swing; analysis of real samples has begun, and these tests are being scrutinised thoroughly so as to troubleshoot interfering outcomes and false positives.

- Take Home Ration service of the Integrated Child Services Scheme: Documenting the status in select states of India- TINI. The report discussed that was prepared during the last assessment year has now been published. (https://www.researchgate.net/publication/348275249_TAKE_HOME_RATION_SERVICE_OF_THE_INTEGRATED_CHILD_SERVICES_SCHEME_Documenting_the_Status_in_Select_States_of_India). The report elucidates a comprehensive picture of the type of Take Home Ration (THR) distributed in several districts of India by documenting the current status of THR in select states of India.

Besides these projects, around 15 research articles have been published by IITGN faculty/research staff and students relating to SDG 2. Nearly 13 authors from the institute have contributed to these articles. The articles deal with issues related to fertilisers, climate and agriculture and women's nutrition.

Education

Courses related to this particular SDG that were offered in the institute are

CE 605: Remote Sensing of Land and Water Resources- The course highlights the use of remote sensing technologies to deal with irrigation management, impact on agricultural and crop area detection etc.

HS 515: The Politics Of The Environment- The course deals with various political decisions and natural hazards and creates awareness about the food and habitat issues faced by victims.

Community Outreach

Besides the action taken for food quality and nutrition of the students, faculty, and staff members, the institute also envisions and strives for the food security of a larger community. Even though our reach is limited, we try our best to provide support to as many as possible. Some of the activities are mentioned below-

- Padosi gram Sahyog Samiti: This supportive programme was started in May 2020 and continued up to 2021. Under this scheme, 152 needy families were provided with food kits in Palaj and Basan.
- Shramik Kalyan Samiti: IITGN leaves no stone unturned in the care of the construction workers of the institute. To overcome the challenges rendered by Covid-19, the institutes conducted various drives in which food items were distributed among the construction workers so that their nutrition levels were not affected. Some of the items distributed among them are listed below-
 - Distribution of Biscuits - 2171 Packets
 - Distribution Sweets & Snacks - 560 Packets
 - Distribution of Milk Powder(Amul) - 500 Packets
 - Distribution Namkeen and Water Bottles -144 Packets
 - Distribution of Nutritious Food (Apples, Oranges and Amul Tetra Pack to Covid positive workers)

- Mid-day meal facility: This facility is available for school kids who study in an NYASA-run school in a student mess. However, this facility was interrupted during the Covid wave for some duration of the year.

Operations

As part of its mission, the institute promotes sustainable food practices and supports young entrepreneurs working in the area of agriculture. The mess contractors are directed to have appropriate licences and documents related to food and business. In addition to managing the food supply chain responsibly, the Institute undertakes programs and initiatives that reduce environmental impact.

Food supply is designed with and must conform to the following requirements:

- Sustainable, healthy, and affordable food choices: The Institute encourages efforts to ensure healthy eating practices for the campus community (a balanced diet menu in the mess which includes seasonal fruits and vegetables, mess are bound to use, as far as possible, items having "AGMARK" or "ISI", or "FSSAI" mark) and high-quality services at all eating establishments on campus (FSSAI approved and fortified foods).
- The Institute ensures high standards for the quality of food served in its dining halls and other eating establishments. All the food establishments on campus are required to have a valid FSSAI licence. Thus resulting in IITGN bagging the '**Eat right campus award**' for the second consecutive year.
- Tracking of food waste: Measurement of food wasted in each meal and dissemination of the data to all mess users is still in practice. Besides, awareness using slogans, pamphlets, and competitions are also conducted. Food wastes (wasted food, peels of fruits and vegetables etc) of the Mess are sent to the biogas plant. Excess if any is used in compost pits for the preparation of compost.
- Kitchen garden and organic farming practices: The IITGN organic farm grows several varieties of vegetables, using only completely organic fertilisers for growing various crops. The organic farm produce is sold to the community. Besides this, faculty housing also gives an opportunity to residents to grow their own food in kitchen gardens provided to them. The community is encouraged to grow organic food by providing adequate guidance and materials provided by the organic farm.
- Sustainable agriculture and food-related startups: IIT Gandhinagar Innovation and Entrepreneurship Centre (IIEC) support startups that focus on digital and technical transformation in the agriculture sector, reduction of food waste, analysing and reducing the risk associated with agriculture, and water sectors. InfyU Labs, an agritech startup pre-incubated at IIEC and supported under the Nidhi Prayas programme, has raised Rs 1.8 crores in a seed round from Indian Angel Network (IAN). The company, currently part of IITGN Research Park, specialises in creating portable devices that determine the internal quality of fresh fruits without cutting them open.
- Snack Kiosk: Beside 4 food outlets there are vending machines that work 24*7. Two vendiman machines (one in AB 5 GF and one at Hostel). Vendiman machine for packaged snacks and fruit juice packs, One Visicooler machine for fresh fruits in the hostel, Refilling frequency is two times a week.