

SDG2: ZERO HUNGER

Hunger and Food Security in India:

India confronts significant challenges related to hunger and food insecurity. Factors such as poverty, limited access to nutritious food, and regional disparities contribute to the prevalence of hunger in various parts of the country.

Government Measures for Food Security:

Public Distribution System (PDS): The Indian government operates the PDS, which provides subsidized food grains to economically vulnerable populations to ensure food access at affordable rates.

Midday Meal Scheme: Implemented in schools, this scheme aims to provide free meals to schoolchildren, encouraging regular attendance and addressing hunger among students.

National Food Security Act (NFSA): Enacted to ensure food and nutritional security for all, the NFSA guarantees subsidization of essential food commodities for the marginalized sections of society.

UPES University's Initiatives to Address Hunger:

Campus Food Programs: UPES has introduced various food programs within the university, including meal assistance or subsidized meal options to ensure students have access to nutritious food at reasonable prices.

Community Outreach: Collaborating with local NGOs, UPES organizes food drives, awareness campaigns, and outreach programs to combat hunger and malnutrition in nearby communities.

Research and Innovation: The university's research and innovation efforts focus on sustainable food production, agricultural practices, and solutions for ensuring food security, thereby contributing to national food sustainability goals.

Future Directions and Impact:

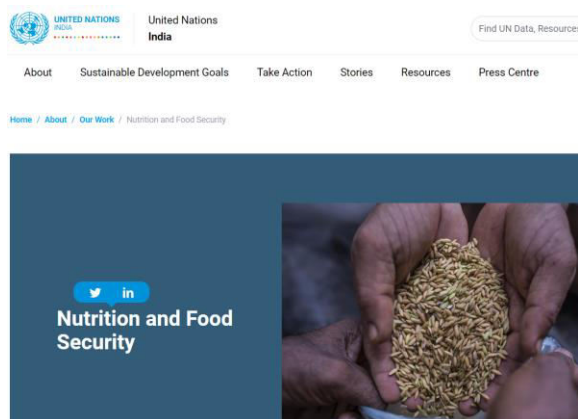
UPES University's commitment to addressing hunger and food security within the university and the wider community has a profound impact on reducing food scarcity and promoting nutrition.

By expanding outreach programs, strengthening food security initiatives, and integrating innovative solutions, UPES can further contribute to combating hunger in the region and promoting sustainable food practices, thereby supporting the national goals for food security.

In conclusion, while the Indian government implements various food security measures, UPES University's initiatives within its campus and the wider community play a vital role in tackling hunger and ensuring access to nutritious food, aligning with the broader efforts to address food security challenges in India.

Nutrition and Food Security

<https://india.un.org/en/171969-nutrition-and-food-security>



India has done well to expand food production and build up adequate safety stocks of food grains. For over 70 percent of rural Indian households, agriculture, including livestock, still remains the principal source of livelihood. With a six-fold increase in food grain production from 50 million tonnes in 1950-51 to nearly 300 million tonnes in 2019-20, India has become a net food exporter, being the ninth largest exporter of agricultural products in the world. The share of agriculture and allied sectors in the total Gross Value Added of the Economy have improved to 20.2 per cent in the year 2020-21 and 18.8 per cent in 2021-22.

With these gains, India has transitioned from being a food-deficit nation to a self-sufficient food-producing country in the last 30 years. This has been possible through the 2013 National Food Security Act (NFSA), under which the Public Distribution reached 813 million people with subsidized monthly household rations (rice, wheat or millets).



The National Food Security Act 2013 aims to provide for food and nutritional security by ensuring access to adequate quantities of quality food at affordable prices. Through 543,562 fair price shops and 237 million ration cards, priority households are entitled to receive 5 kg of food grains per person per month at the issue prices of Rs. 3, Rs. 2 and Rs. 1 per kilogram of rice, wheat and coarse grains respectively.

As an impact of various government schemes, levels of under-nutrition among children have come down over the past decade. From 2005 to 2019, stunting among under-5 children declined from 48 to 35 percent and the proportion of underweight children dropped from 43 to 32 percent. The proportion of children aged 6-59 months who were anaemic fell from 69 percent to 58 percent for the period 2005 to 2015.

Challenges

While the Government has identified pathways to improve agricultural productivity, it is not clear that these will provide sufficient benefits for the marginal and small farmers working on rain-fed plots who dominate Indian agriculture.

For this group, there are new challenges. Firstly, growth rates in agriculture have been fluctuating as farming becomes more vulnerable to climate change. Secondly, land degradation constitutes a major threat to India's food and environmental security and so does rapidly shrinking bio-diversity. Large tracts of farmlands in India have become barren due to imbalanced fertiliser use and excessive use of a single fertiliser, urea. Third, about 30 per cent of the 5,723 administrative blocks in the country report that groundwater is at unsustainable levels. The gradual decline in size of farm holdings and productivity has forced many farmers to look for other livelihood opportunities.

Compounding these challenges, are food safety concerns, particularly for the urban poor and migrants. Food contamination with infectious viruses and bacteria comes from untreated water, pest infections, poor environmental sanitation, poor hygiene, and poor waste management. About half of the cases of child malnutrition are associated with unsafe water, inadequate sanitation or insufficient hygiene. Improved nutritional status depends upon the avoidance of food-borne infections.



Due to social and economic disparities, nutrition, especially in women and children, is still an immense challenge. The aggregate decline in childhood stunting is not fast enough to meet global targets. India is increasingly confronted with the double burden of malnutrition: About 11 percent of children aged 6-23 months received an adequate diet in 2019-20. This is paired with an increased prevalence of overweight children and obesity in children and adolescents, which can lead to non-communicable diseases (NCD) in adulthood.

Women and girls are particularly disadvantaged due to their unequal nutritional and health status. This vulnerability is worsened by the growing feminization of poverty and agriculture, with 79 percent of rural women workers in farming and agriculture, who have limited voice, choice, and security, and only 13 percent have landholdings in their name. Ensuring that women farmers have equal rights to land and other forms of property and equal access to rural extension and financial services will increase agricultural productivity and ensure food security for their families and communities.

Government interventions

The government launched several programmes to double farmers' incomes by 2022. These seek to remove bottlenecks for greater agricultural productivity, especially in rain-fed areas. They include: the National Food Security Mission, Rashtriya Krishi Vikas Yojana (RKVY), the Integrated Schemes on Oilseeds, Pulses, Palm oil and Maize (ISOPOM), Pradhan Mantri Fasal Bima Yojana, the e-marketplace, as well as a massive irrigation and soil and water harvesting programme to increase the country's gross irrigated area from 90 million hectares to 103 million hectares by 2017. The Mahatma Gandhi National Rural Employment Guarantee Act and the National Rural Livelihoods Mission have provided support for agriculture and livelihood in rural areas.

The government has also taken significant steps to combat under- and malnutrition over the past two decades, such as through the introduction of mid-day meals at schools, anganwadi systems to provide rations to pregnant and lactating mothers, and subsidised grain for those living below the poverty line through a public distribution system. The National Food Security Act (NFSA), 2013, aims to ensure food and nutrition security for the most vulnerable through its associated schemes and programmes, making access to food a legal right.

The launch of the POSHAN Abhiyan (Nutrition Mission) in March 2018 refocused the national agenda on nutrition. The POSHAN Abhiyaan Jan Andolan (people's movement for nutrition) further intensified regular monthly mass communication on nutrition behaviours.



Food technology can save the world. And you can be a part of it

<https://blog.upes.ac.in/food-technology-can-save-the-world-and-you-can-be-a-part-of-it/>



Food technology

Technological advances in food have clearly changed what goes on our plate and how. With growing scope and advances in the field, private and public organisations are increasingly hiring food tech professionals. As a profession, Food Technology is not only lucrative but also a fulfilling career that promises security, a diverse environment, good earning possibilities, as well as recognition

During their long expeditions, explorers such as James Cook and Christopher Columbus carried foods preserved in syrup and brine (a highly concentrated salt-water solution) for their longer shelf life. In 1810, French confectioner Nicholas Appert developed the canning process – an airtight food preservation method that is used practically everywhere today. In 1863, Louis Pasteur developed the Pasteurisation process, which helps improve the shelf life of food products. In 1961, Soviet cosmonaut Yuri A. Gagarin became the first human to eat in space, squeezing beef paste from an aluminium tube into his mouth. Day by day, novel techniques are continuously being employed in food processing for minimal nutritional and sensory losses.

What began as an attempt to conserve food has gradually transformed into a comprehensive field known as Food Technology. Today, along with preservation, it involves the production, quality control, as well as research and development of food products. Processing of food prevents food wastage, improves economical gain, and generates employment. The processed food with higher shelf life can be supplied to longer distances, leading to a surge in food markets.

In a world that faces the challenge of feeding 9.7 billion people by 2050 – a sharp rise from the current global population of 7.9 billion – governments are looking at ground-breaking innovations in food technology to solve the issue of food security. Food technology is also getting attention due to increased consumer awareness about what goes on their plate, where it comes from, as well as changing food preferences that seek alternatives to conventional food items. Environmental concerns are also augmenting the need for a better understanding of the subject.

It is crucial to provide enough nutrients and nutraceuticals in food in addition to satisfying the satiety. A micronutrient deficiency, which affects more than 2 billion people, not only has negative effects on one's own health but also on the global economy. When someone has a disease, special foods and individualised diets are created. Both weight gain and weight loss foods are created. Energy drinks and protein powder are now widely available in the market as sports foods.

With growing scope and advances in the field, private and public organisations are increasingly hiring food tech professionals. Food Safety and Standards Authority of India (FSSAI 2011) enforces each food processing industry/restaurants/hotels to follow all FSSAI regulations for maintaining hygiene, cleanliness, safe food production, and supply. As a profession, food technology is not only lucrative but also a fulfilling career that promises security, a diverse environment, good earning possibilities, as well as recognition.

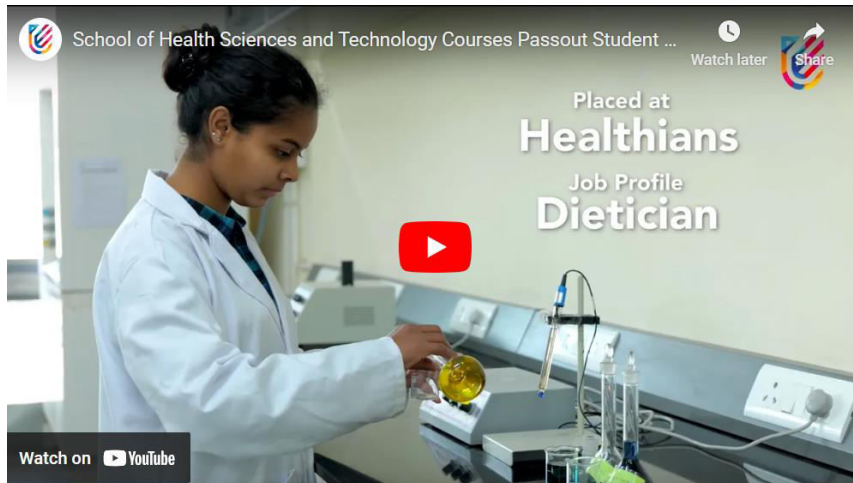
However, it is crucial to study the program from a university that is abreast with the latest developments in the industry. If you want to learn, learn from the experts.

[Why UPES School of Health Sciences and Technology?](#)

A B.Tech. in Food Technology from UPES School of Health Sciences and Technology lays a solid foundation in all areas of the subject and offers specialisations such as Food Biotechnology and Food Plant Engineering. Besides classroom teaching, students are given clinical and community exposure so that they become active change-makers and solution providers for the healthcare sector. The jobs and entrepreneur-oriented knowledge and facilities are provided to students.

UPES School of Health Sciences has a tie-up with Taipei Medical University, Taiwan to provide opportunities for students, research scholars, and faculty for academic collaboration and joint research projects.

The industry-aligned curriculum taught by faculty who are specialists in their respective fields along with active collaborations with industry leaders enables students to develop professional competencies required to address the world's health challenges.



Food start-up incubated at UPES seeks to empower local communities

<https://blog.upes.ac.in/food-start-up-incubated-at-upes-seeks-to-empower-local-communities/>

UPES EDITORIAL TEAM · OCTOBER 1, 2021



FitBread UPES Alumni

UPES alumnus Aryan Singh

(seen in the picture) founded 'FitBread' with Akshit Saxena and Aditya Kashyap

Three passionate youngsters including UPES alumnus Aryan Singh founded 'FitBread' to provide preservative-free, whole-wheat bread. Their hiring of women workforce and using locally-sourced ingredients has resulted in the financial empowerment of Uttarakhand communities

In the past decade, the Indian market has hardly seen any variegation in bread products. Consumers have to choose from the same monotonous range of brown bread, atta bread or multigrain bread. Being produced commercially, they use preservatives, artificial colours, emulsifiers, improvers, acidity regulators, flour treatment agents, and often do not divulge complete information about the ingredients they use. Some of the most popular brands have only 38% wheat flour in their atta bread and only 32% in brown bread, the remaining is maida or white flour. In multigrain loaves of bread, the grains are just used on the outer layer of the loaf.

Three young minds, Akshit Saxena, Aditya Kashyap, and UPES alumnus (MBA in International Business, 2017-19) Aryan Singh, understood the gap and began working to create a healthy and genuine alternative for bread-lovers. And in 2021, 'FitBread' was born as India's first fitness bread brand. Incubated by UPES Council for Innovation and Entrepreneurship (UCIE), it has already started garnering appreciation from the consumers.

Baking the recipe to health

One of the founders of FitBread, a diet chef, started experimenting with various combinations, to find out where he could make improvements. It took him six long months and almost 20 batch trials to come up with the right mix. Each loaf of FitBread is made from whole wheat atta dough, expertly kneaded with flax seeds, oats, and amaranth seeds, so that the grains are found not just on the crust, but inside the loaf as well.



'FitBread' Co-founder Aditya Kashyap

FitBread products are produced with whole wheat grain atta, and are free from preservatives, molasses, improvers, acidity regulators, flour treatment agents, artificial colours, and emulsifiers. They are nutritious and, most importantly, tasty too!

FitBread range is available in six different flavours and is made with common everyday ingredients found in household kitchens.

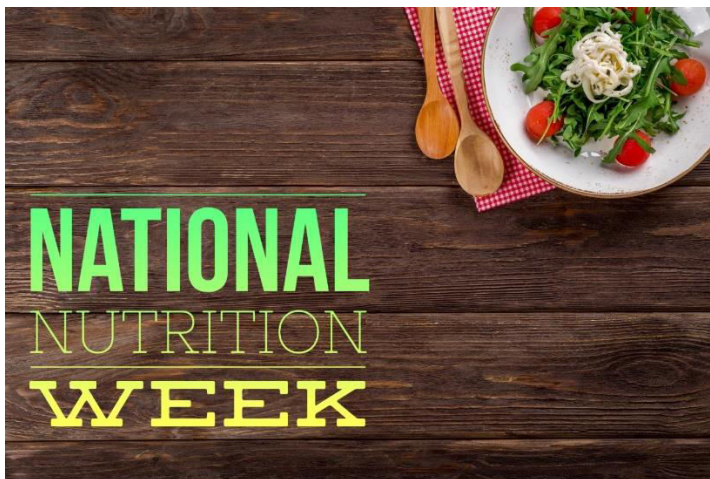
Strengthening local community through inclusion and skill-training

At FitBread, ingredients are sourced locally from small vendors, thus creating additional Business-to-Business (B2B) revenue channels. The procurement of regional superfoods for FitBread products is a boon to local businesses. The hiring of a women workforce for the bread-making process while also imparting additional bakery skills and training to them, has resulted in financial empowerment of the local communities in Uttarakhand.

The founders of FitBread are working with the vision to expand their operations to other states as well. They are passionate about educating people about wellness and creating post-pandemic sustainable and scalable growth opportunities for local businesses. These entrepreneurs are working with the core belief of staying “committed to being connected” to their roots.

[How a nutritionist can help you monitor your diet](https://blog.upes.ac.in/how-a-nutritionist-can-help-you-monitor-your-diet/)

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National Nutrition Week focuses on the importance of a balanced and nutrient-dense diet, thereby building a healthier society

Nutrition Week is celebrated from September 1 to September 7 to spread knowledge about nutrition and its importance for the human body, after the Food and Nutrition Board launched it in 1982. For a healthy lifestyle, energetic body and better immune system, a nutritious diet plan is extremely important. The theme for National Nutrition Week 2020 is ‘Eat Right, Bite by Bite’. This time the theme focuses on the main sources of nutrition which should be chosen wisely and advises people to explore the nutritious food groups which are abundantly and locally available. Also, nutrition week propagates a holistic approach towards a healthier society. Awareness generation camps, workshops and educational programs inform people about nutritious foods and how a balanced diet reduces the risk of diseases.

Says well-known nutritionist Nmami Agarwal, “Healthy nutrition goes way beyond just fuelling your body. It provides you energy, keeps your organs healthy, helps you manage weight and strengthens your immunity. A healthy and balanced diet essentially eliminates or limits the consumption of processed, junk and saturated fat foods while the focus is more on food derived from natural sources like fruits, vegetables, and whole grains. Portion control is the key when it comes to following a balanced diet and healthy nutrition. The focus should be on having regular meals filled with all five food groups which are carbohydrates, proteins, fats, vitamins and minerals balancing your macronutrients and micronutrients.”

Healthy nutrition goes way beyond just fuelling your body

Here’s how a nutritionist can help monitor your diet:

Encourage healthy eating habits: Nutritionists use a scientific and food-based approach to evaluate an individual’s eating habits and to create a personalized dietary plan. They will guide their clients towards eating fresh, natural foods, eventually promoting healthy eating.

Achieve better health and maintain weight loss: Nutritionists help create individualized meal plans for weight loss, mood, and energy. Family meal planning is often part of a weight loss plan, as well. In addition to meal planning, a nutritionist may also suggest basic wellness supplementation to assist a client in achieving health and weight loss goals.

Implement behavioural-change modifications and dietary approaches: The underlying behaviours that affect healthy lifestyle choices also need to be addressed and modified. A nutritionist can help a client identify destructive eating habits and help implement a healthier dietary plan. In addition, a nutritionist can assess a client’s level and choice of activity and make appropriate modifications based on individual needs and goals.

Suggest ways to improve lifestyle and manage stress: Stress is the root cause of all the problems. Nutritionists take classes on wellness and holistic nutrition to help clients improve their lifestyles and manage daily stress.

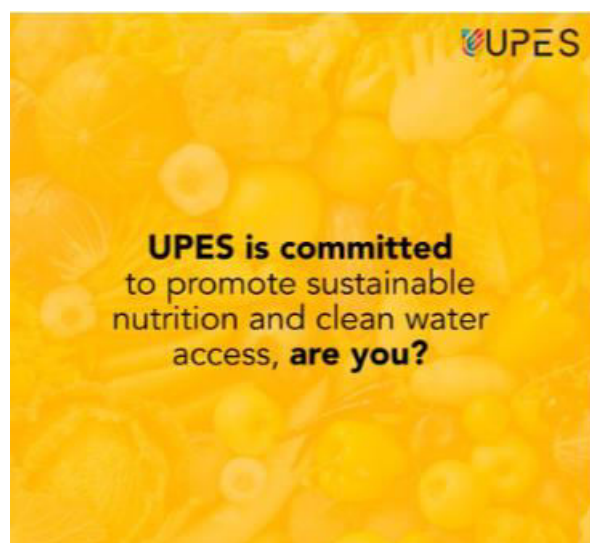
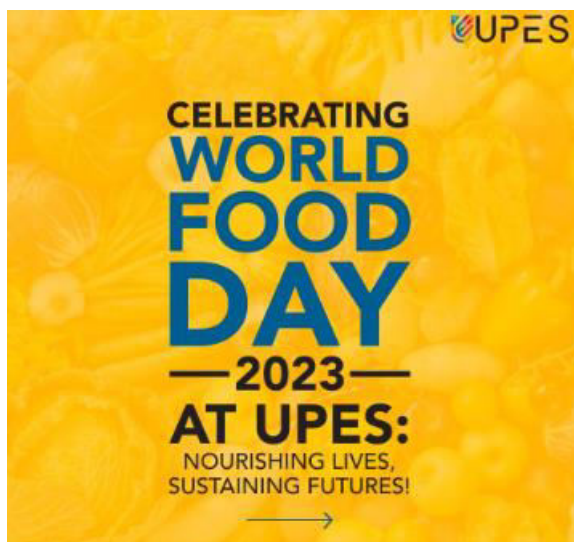
To tackle various health problems and create awareness among students about the importance of nutrition and a balanced diet, UPES School of Health Sciences also commemorates National Nutrition Week. Presentations, webinars, activities and fun games are a part of the celebration.

According to the Dean of UPES School of Health Sciences, Dr. Neeraj Mahindroo, "UPES celebrates National Nutrition Month to emphasize the importance of a nutrient-dense diet to thrive both physically and mentally. Here, the role of a nutritionist becomes vital in selecting the right kind of food to meet an individual's requirement and boosting immunity. There are a few sessions lined up that will create awareness about health, nutrition, the importance of workouts and ways to get essential nutrients from local produce."

World Food Day

https://www.linkedin.com/posts/upesdehradun_world-food-day-at-upes-activity-7119633667982815233-YoLO

School of Health Sciences & Technology, UPES celebrated World Food Day on October 5th, echoing the theme, "Water is Life, Water is Food, Leave No One Behind," in alignment with Sustainable Development Goals. Ms. Amandeep Kaur, Additional Secretary, National Health Mission (NHM), Government of Uttarakhand, shared enlightening keynotes with students. The 'Explore, Evaluate, and Express' video contest showcased students' creativity, emphasizing our dedication to sustainable nutrition and clean water access. Join us in championing sustainable nutrition and clean water access for all!



Why is it important to recycle food waste?

<https://www.facebook.com/photo?fbid=359444922864581&set=a.356095576532849>



Food waste that is not recycled may be sent to landfill where it rots, causing a huge negative impact on the environment by releasing methane – a harmful greenhouse gas that is 25 times more potent than carbon dioxide.

Some local councils send their non-recyclable waste to be incinerated to create useful energy. However, food waste is composed of about 70% water, requiring considerably more energy to burn it, making this a less efficient method of disposal than recycling.

More and more people are recycling their food waste. If we all stopped wasting the food which could have been eaten, it would have the same CO2 impact as taking 1 in 4 cars off UK roads.

Two generations from now, people are going to look back and wonder how we allowed for food waste to become such a big problem. After all, it's not like finding a cure for cancer – you don't need special expertise to contribute to a solution. Every time you do your groceries or consider throwing away food that can still be used, you get an opportunity to make those future generations happy. Use it.