

Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN)

Nutrition is a basic human right with both equity and equality related to eliminating malnutrition and ensuring human development. The Constitution of Bangladesh cites nutrition in Article 18 (1), describing the principles of State governance: “... the State shall regard raising the level of nutrition and improvement of public health as among its primary duties...”, Improving nutritional status is also an important factor for overall development process. Over the last three decades, Bangladesh has managed the feat of producing enough rice to keep up with population growth – which almost doubled to 160 million. In terms of calorie availability, it has achieved self-sufficiency. People’s economic capacity to access food has risen through a rapid decline in the poverty headcount – from 48.9% in 2000 to 23.2% in 2016, 90% of which is accounted for by agriculture and an increasing purchasing power even among the poorest. Despite the challenges, Bangladesh has made strides in reducing the prevalence of stunting nationally, falling from 41 percent in 2011 to 36 percent in 2014 (NIPORT *et al.* 2013; NIPORT *et al.* 2016) Wasting is deemed “high” in Bangladesh at 14 percent of children under 5 years, according to the 2017 public health prevalence threshold (NIPORT *et al.* 2017;WHO/UNICEF 2017). In spite of significant economic progress and poverty reduction still the undernutrition and overnutrition are prevailing in our society due to some challenges. Investing in nutrition has been a commitment in Bangladesh from the highest level of leadership. Policies and policy instruments to address food security and nutrition particularly maternal and child under nutrition have been developed and problems of nutrition are being addressed by both nutrition specific and sensitive interventions.



National Professor Late Dr. Md. Ibrahim has started a project namely ‘Applied Nutrition Project’ in 1968 at Jurain, Demra in order to improve public health as well as scale up of the nutritional status of the people through applied nutritional sensitive program. The main objective of the project was to solve the nutritional problem of self realization. Based on its success, the project was renamed as Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) based in Dhaka under the Ministry of Agriculture. Later, BIRTAN continued as an associated organ of Bangladesh Agriculture Research Council (BARC) from 1980 to 1993 and in 1994 it act an autonomous body and its activities were expanded to other parts of the country through establishing 4 regional centers. In 2012, Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) Act, 2012 passed in the National Parliament and subsequently Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) (Officers and Staff) Service Regulation, 2016 was also formulated and published the Bangladesh Gazette on 11 July 2016.

Main objective for the establishment of BIRTAN is to aware all segmenting of the people about the importance of food based nutrition primarily through training and research. Training includes human resource development on food based nutrition through trainers training and to create awareness among the mass people of the society. BIRTAN also participate in agricultural /food fairs, and create awareness through mass media. BIRTAN conduct research about the nutritional status of different segment of the people in different areas, knowledge about food based nutrition, dietary pattern, water, sanitation and hygiene (WASH), calorie intake, balanced diet, bio fortification of food etc.

Vision :

To improve nutritional status of the people of Bangladesh

Mission :

Contribute to develop nutritional status of people by implementing research, training, workshop, seminar on food and nutritional based activities as well as broadcast nutritional message in mass media.

Activities of BIRTAN

According to the Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) Act, 2012 BIRTAN will perform the following activities:

- ▶ To take and implement research and development activities on food based nutrition (applied nutrition) with a view to increasing the nutrition level of the people;
- ▶ To provide training on food nutrition for the officers of the Government and non-government organizations, teachers of various educational institutes, local government representatives, farmers and others and create awareness among them regarding the nutrition related policies;
- ▶ To invent technology and conduct research on sustaining pre and post losses of food grains collection and food process and preservation;
- ▶ To conduct research on functional food and medical plants and to increase production thereof, include them in their daily food items and enhance awareness thereof;
- ▶ To analyse, ascertain and update the nutrition value of food grains, and make or give assistance to make list of daily necessary food items;
- ▶ To specify district, upzilla or agro-ecological zone-basis malnutrition related health problem and exchange of information received with the concerned ministry of organization for ensuring the safety of food and nutrition;
- ▶ To conduct research on harmful effect of chemical or arsenic used in food chain and enhance consumer awareness of it;
- ▶ To increase awareness of nutrition and health of the people of all levels by participating in the agriculture-fair, world food day, nutrition week, livestock fair, fish fair, environment day, etc. including publishing in various public and electronic media;
- ▶ To make measures for research and development activities separately and jointly, with the concerned research institution, for inventing much nutritious food items, varieties and technologies;
- ▶ To create skilled human resource on nutrition by implementing certificate and diploma course on applied nutrition and food science;
- ▶ To include or update, make and assist to make texts regarding applied nutrition properly in various educational curriculum;
- ▶ To make recommendations, on emergency measure, during malnutrition problem caused by natural or any other reasons;
- ▶ To provide assistance, for ascertaining the effect of climate change on the nutritional level and conducting research and implementing the activities relating thereto;
- ▶ To formulate policies implement and make recommendation on the activities relating to the Institute; and
- ▶ To perform such other duties as may be assigned to, from time to time, by the Government.

Major Functions of BIRTAN

A. Training: One of the major tasks of BIRTAN is to conduct training on food based nutrition through which human resource will be developed and awareness level of mass people will increase at desired level. Training program includes theoretical aspects as well as practical one. Thus, there is a balance of theoretical and practical learning experiences that enable to apply the knowledge in their respective domain. The course content is considered as unique of its multi disciplinary, integrated and holistic approach that deals with food, nutrition and management.

Following training programs are being conducted by BIRTAN:

1. Human Resource Development on Food based Nutrition through Trainers Training

Human resources are developed through a 5 days long trainer's training (TOT) on food based nutrition. District/ Upzilla level officers of various organizations particularly the Department of Agriculture Extension (DAE), attached departments of Agriculture Ministry, Department of Fisheries, Department of Livestock, Department of Children and Women Affairs attend the training program organized at head quarters, Dhaka office. Each batch consists of 30 personnel of TOT. TOT conducted through Integrated Agricultural Approach for Ensuring and Food Security Project (IANFP-BIRTAN part) and Infrastructure Development and Strengthening of Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) Project.



Topics of TOT includes balance diet in different age, major ingredients and sources of food and its activity along with daily intake, nutritional ingredients in fruits, contribution of agriculture for the development of nutritional status, sources of micronutrients and required amount of daily intake, climate change and its impact on nutrition, postharvest management and its effect on nutrition, thousand days nutrition for infant, importance of medicinal plant on nutrition, food sanitation and food hygiene, measurement of nutritional status, theoretical and practical aspects of cooking process with keeping nutrition intact, water sanitation and hygiene (WASH) etc.

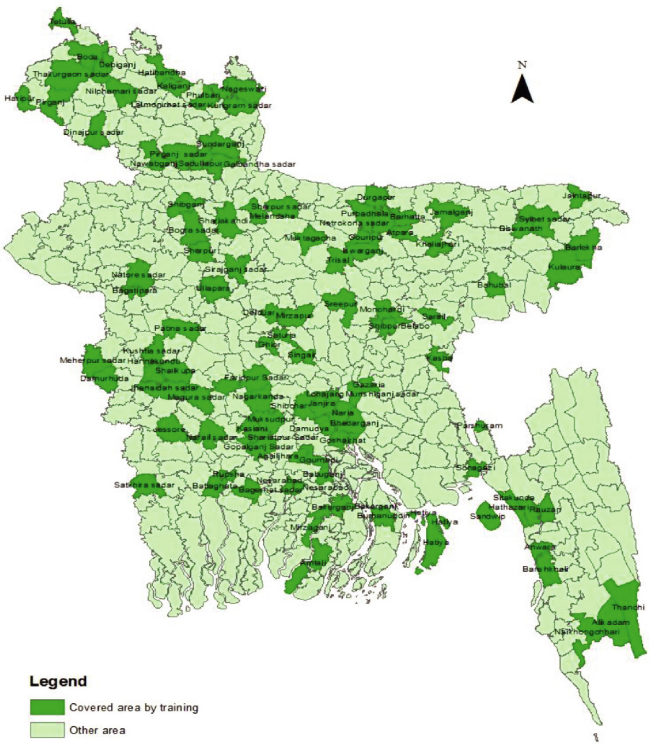
2. Dissemination of necessary information on Food based Nutrition Training

Development of awareness level regarding food based nutrition through 3 days training program conducted among the field workers of government officials of DAE, school teachers, Field officer of NGO, elected representative of local government, Imam and farmers. Training program usually conducted in different upazilla with the assistance of concerned Upzilla Agriculture Officer. There are two types of training arranged in the same venue and each training consists of 30 participants respectively. Trainees in first batch includes the government and non-government officials, members of local representative, teachers, imams, priest, social workers etc. while in the second batch only farmers (both male and female) are the trainees. Training conducted through revenue budget as well as Integrated Agricultural Approach for Ensuring and Food Security Project (IANFP-BIRTAN part) and Infrastructure Development and Strengthening of Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) Project. BIRTAN recently started dissemination of nutrition training among the garment workers.



Topics of dissemination training includes major and minor sources of ingredients of food, activities of food and required daily intake, nutritional value of main foods, balance diet of different age, diseases due to the lack of nutrient in food and how to address it, cultivation of nutrient rich vegetables, mushroom, maize and its role to prevent disease as well as importance to development of nutrition, fish production and its importance to development of nutrition, role of poultry for protein deficiency, role of medicinal plant for health, effective cooking process in order to prevent nutritional loss, food preservation in family level, primary health care, diseases due to lack of intake of nutrient food and how to prevent disease with nutrient rich food intake, nutritional ingredients in fruits and importance to health etc.

The pictorial view of the covered area by training conducting by BIRTAN from July to December 2018



B. Seminar/Workshop: BIRTAN arranges seminar / workshop in head office as well as regional offices with different nutritional related topics. The objectives for arranging seminars are to enhance the level of knowledge, development of skill and to better understanding of the nutritional issues by the participants. The participants are from different relevant government, non-government organizations, NGO, development partners, school teachers, imams, media personnel, local government representatives and the officials of BIRTAN. Experts (University teacher, researcher, senior executive) of respective topics are usually invited as paper presenter. Nutritional aspects, its discourse, role of BIRTAN along with other relevant organizations, national and global level activities of nutrition, achievement of SDG goal etc. can be understood clearly by the participants through attending the seminar.



Topics of the seminar:

- ▶ Ensuring Safe Food and Increased Nutrition to Build a Healthy Nation
 - ▶ Climate change and its impact on nutrition
 - ▶ Food Habit and Life Style: Key to Nutritional Security in Bangladesh
 - ▶ Impact of Climate Change on Food Safety and Nutrition in Coastal Region
 - ▶ Nutrition and Food Security
 - ▶ Child Stunting and Wasting in Bangladesh: Causes and Remedy
- [As of November 2018]





C. School Campaign: Awareness of food based nutrition conducted among the school children through participating different activities arranged by BIRTAN under Integrated Agricultural Approach for Ensuring and Food Security Project (IANFP-BIRTAN part). Adolescent period is very important one in life cycle. Information and necessary messages referred to the school children through the campaign is one of the effective method to enhance the nutritional knowledge which enable them to have clear concept of the importance of nutrition. Nutritional awareness campaign includes the activities of homestead gardening, debate, seminar, distribution of food plate of balance diet etc.

D. Fairs: Nutrition awareness buildup through participation in fairs is one of the activities of BIRTAN. Every year Agriculture Fair, Vegetable Fair, Fruits Fair arranged by the Department of Agriculture Extension (DAE) in head quarter along with district level. Nutrition related fair also arranged by the Ministry of Food, Health and Family Welfare, Fisheries and Livestock and BIRTAN participated those fair as well. Apart from that Ministry of Public Administration arranged Development Fair in Dhaka and in different districts. BIRTAN actively participated those fairs and create nutrition awareness among the visitors on nutritive value of crops, vegetables, fruits, balance diet, importance of nutrients and micro-nutrients for health, weaning food, home scale processing and preservation of fruits, importance of intra family food distribution etc. and also distributed leaflet, poster among the visitors.



E. Mass Media: Creation of nutrition awareness through mass media is another important activity of BIRTAN. Nutrition messages particularly nutritive value and diversified use of different fruits and vegetable are communicated to the general mass through radio program on regular basis in Dhaka and regional centers. This program is done in collaboration with the Agriculture Information Service (AIS).



F. Coordination: BIRTAN keep constant coordination among the stakeholders of different government, non-government, NGO and developing partners those who are working with nutritional aspects. BIRTAN actively participated for the formulation of Plan of Action for The National Food Policy under Ministry of Food, Second National Plan of Action for Nutrition (NPAN2) under Ministry of Health and Family Welfare and Bangladesh Second Country Investment Plan, Nutrition-Sensitive Food Systems (CIP2) under Food Planning and Monitoring Unit (FPMU) of Ministry of Food. BIRTAN actively engaged with the activities of different committees constituted under said actions so far taken nationally. BIRTAN also keep in touch with the activities of Bangladesh National Nutrition Council (BNNC) and Institute of Public Health Nutrition (IPHN). It also exchanges views, ideas, research activities with Institute of Nutrition and Food Science (INFS) of Dhaka University.



Training Manual

Food based nutrition training is very important aspect for better understanding of the trainees as well as trainers. The content of the course and the subjects are being taught needs careful design in the curriculum. Hence, it is needed to prepare a training manual for smooth functioning of the training. BIRTAN so far prepared 3 training manual namely, 'Food Based Nutrition Training Manual', 'Food Based Nutrition related Manual' and 'Applied Nutrition related Trainer Training Manual'.



Organizational set-up

At present, BIRTAN is having 257 posts of which Class-1 post is 77, Class-2 post is 38, Class-3 post is 79 and Class-4 post is 63. Seven Regional Centers have been established in seven divisions of the country. Executive Director is Head of the Institute and Senior Scientific Officer is the Head of the Regional Centers. Head offices is situated in Araihaazar Upzilla of Narayanganj District and the Regional Centers are in Sirajganj, Peerganj (Rangpur), Sunamganj, Barishal, Netrokona, Jhenidaha and Subarno Char (Noakhali).

Project

There are 2 projects are currently working with BIRTAN. These are:

1. Infrastructure Development and Strengthening of Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN)

Project undertaken in 2013 and the estimated cost are 33212.00 (in Lakh Taka) and funded by the Government of Bangladesh (GOB).

Objectives of the project is to construct buildings for head office, regional offices, research laboratories, training centers, residential accommodations, and to develop experimental fields and farms. Projects also extend motivational and awareness building training on food based nutrition, food hygiene and sanitation, food safety and nutritional security, postharvest technologies, food processing and preservation, consequences of food adulteration.

Construction of head offices along with different components are nearly completed while Regional center of Sirajganj have almost completed. Regional centers of Rangpur, Barishal, Jhenaidah and Sunamganj have also been nearly completion stage while Netrokona and Shuborno Char will be completed by 2019.

2. Integrated Agricultural Approach for Ensuring and Food Security Project (IANFP-BIRTAN part)

Project undertaken in 2013 and the project cost are 700.00 (in Lakh Taka) and funded by the Government of Bangladesh (GOB). Char and poverty prone areas have been selected as project area which covers 88 Upzilla under 29 districts.

Objectives of the project is to create nutritional awareness among the farmers, women and school children through training, campaigning, establishing homestead and school premises fruits and vegetable gardening and motivational program.

Research

One of the main functions of BIRTAN is to conduct research regarding nutrition issues. BIRTAN so far conducted following research work:

The list of research works are conducting by BIRTAN

Sl. No.	Research Title	Location	Period
1.	Increasing Food and Nutrition Security at SunamganjHaorHomestead Area of Bangladesh.	Sunamganj	July 2017- June 2020
2.	Increasing Food and Nutrition Security at Chittagong Hill Tracts (CHT) Homestead Area of Bangladesh.	Chittagong Hill Tracts	July 2018- June 2021
3.	Proper Food and Nutrition Consumption and Good Health through Agro-base sources of "Shawtal and others Tribal peoples" in the Barind area	Barind area	July 2018- June 2021
4.	Effect of community base home gardening and nutrition education on vulnerable groups and intervention study.	Rangpur	Jan 2019:- Dec: 2021
5.	Identification of Dietary Patterns and nutritional status of young adults in Birishiri, Netrokona	Netrokuna	Jan 2019: - Dec: 2020
6.	Conservation of Indigenous Herbaceous and Semi-Woody Medicinal Plant and Their Improvement under Pot Condition	Barishal	Jan 2019: - June 2019
7.	Effects of nutrition intervention among adolescent girls in Sunamganj district.	Sunamganj	Jan 2019: - Dec: 2021
8.	Nutritional Status Assessment among Adolescent in Netrokona District of Bangladesh	Netrokuna	Jan 2019: - Dec: 2020
9.	Increasing family income and nutrition through intervention of modern agro technologies	Noakhali	Jan 2019: - Dec: 2021
10.	The effect of Mother's nutritional- hygienic knowledge and behavior on children's dietary intake	BIRTAN, HQ	Jan 2019: - Dec: 2019
11.	Dietary pattern and physical activity level of rickshaw pullers in Dhaka city	BIRTAN, HQ	Jan 2019: - Dec: 2019
12.	Improving nutritional Status through Homestead gardening in the Jamuna's Char area in Sirajganj district	Sirajganj	Jan 2019: - Dec: 2019
13.	Assessment of Nutritional Status of Adolescent girls in selected area of Dhaka City	BIRTAN, HQ	Jan 2019: - Dec: 2019
14.	Enhancing Nutrition Security by Homestead Gardening in the MarjatBaor's area at Kaligong in Jhenaidah	Jhenaidah	Jan 2019: - Dec: 2019
15.	Promotion on nutrient enriched vegetables (radish & cabbage) in lean period in char and haor area of Bangladesh	BIRTAN, HQ	Jan 2019: - Dec: 2019

Some Research Activities



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