

Our Food Balance Sheet

by M M Rashid

THOSE who read newspapers regularly are familiar with the phrase 'self sufficiency in food'. In most of the official documents and the speeches of politicians and officials given in meetings/seminars, it has almost always meant self sufficiency in cereal grains. This is a misconception that has been in use, often consecutively, for decades. Cereals constitute only a part of our food system which includes many other equally important items, like, pulse, fish, meat, milk, egg, oil, sugar, vegetables, fruit and spices. All these items are of daily necessity in our diet.

Successive governments in the past have accorded the top-most priority to the production of the cereals. This was partly because these happen to be our staple foods and partly due to the fact that availability of the cereals imparts a sense of food security in the minds of the people. In spite of a substantial increase in the production of rice and wheat during the past 25 years, self sufficiency in cereals still remains elusive. But by giving too much attention to the cereals we have neglected other vitally important items of food and the result has been disastrous.

We take food not just for survival but to live healthy lives. Our daily diet must supply all of the essential nutrients in adequate quantities, that is, our food should be balanced nutritionally. But practically, the average diet of the people is now heavily deficient in almost all of the essential nutrients. A survey carried out in 1981-82 by the Institute of Nutrition and Food Science, Dhaka University showed that the diet of about 75 per cent of the population is deficient in protein and calorie and that 60-90 per cent of the people suffer from the deficiency of vitamins A and C, calcium and iron. A recent report by the Hellen Keller International says that nearly 30,000 children go blind every year due to deficiency of vitamin A. Clinically, we are thus a nation of sick people with severely impaired physical and mental faculties. We have virtually lost our vitality. Our average height and weight is slowly going down. This situation is bound to have far-reaching consequences for the progress of the nation.

Shortage of food items has been a lingering problem of Bangladesh for decades. Initially, we had to import only rice to supplement local production. Gradually new food items entered the import list. Today, besides rice, we have to import many items including fish, onion, ginger, even eggs and vegetables. Quantities of import are increasing year by year.

We did not approach our food problem from the scientific point of view, that is, the nutritional aspect of the problem was not given due consideration. Increasing shortages of different food items has gradually reduced the diet of the people to one that is incapable of protecting the body, although modern science has provided us with simple ways to combat the deficiencies of at least the micro nutrients. Our failure lies in the fact that we could not tell our people, ignorant as they are about nutrition, how to protect their health. Otherwise the situation would not have become as bad as it is today. Many ailments in Bangladesh are associated with reduced body resistance caused by deficiencies of micro nutrients. That a small quantity of inexpensive vegetables, as little as 50 grams, taken daily in the proper method can eliminate the deficiencies of important vitamins and minerals is a known fact which we could not make use of. I have an intention to elaborate on this statement in a separate essay.

Food is the most important basic necessity of life. It should be interesting for the readers to know our present status in the food front. Periodical review of the food situation is necessary for developing consciousness of the people about a problem of such significance. Even ordinary people can contribute towards a solution, if they know the problem. In this paper, I have tried to assess our demand for food for solving the nutrition problem and have suggested approaches for tackling the problem scientifically.

Scientific Basis of Food Requirement

Foods supply nutrients that are essential for the normal functioning of the body. Prolonged and severe deficiency of any nutrient leads to impairment of body functions manifested by specific symptoms. There are many nutrients but those that are commonly found deficient in Bangladesh include protein, calorie (energy), vitamin A, vitamin B₁, vitamin B₂, vitamin C, calcium and iron. Experts have developed methods for determining the body's need for different nutrients which varies according to age, body weight, sex, profession and climate. The methods are available in a few publications of the World Health Organization and the Food and Agricultural Organization. The Institute of Nutrition and Food Science, Dhaka University has prepared a chart showing the needs of the people of different age groups for important nutrients. Using the chart, I have calculated for Bangladesh the average per capita daily minimum requirements of nutrients which are as follows: protein—60 grams, calorie—2220, vitamin A—2300 international units, vitamin B₁—1 milligram (mg), vitamin B₂—1.1 mg, vitamin C—25 mg, calcium—480 mg and iron—11 mg.

It is however not always necessary to calculate food requirement on the basis of all nutrients individually. A thumb rule that is extensively used world-wide is to calculate food requirement on the basis of energy. Usually it is kilo-calorie alone. In doing this, it is assumed that the required calories will be derived from all kinds of food so that the body's need for other nutrients are met automatically.

What is the average calorie requirement in Bangladesh? Until now there is not a single agreed figure. The National Nutrition Council has proposed 2700 calories per capita per day. The Institute of Public Health and Nutrition has suggested 2200 calories. Incidentally, these two organizations to be located in the same building for many years. According to the FAO office of Dhaka it should be 2332. One document of the Planning Commission says that 1900 calories are sufficient.

There cannot be four different figures for calorie requirement in the same country. I

have done an exercise to synthesize the above proposals and have come up with a figure of 2220 calories. This may be adopted nationally with modification, if any, suggested from any quarter. According to a report of the FAO the average intake of calories in Bangladesh in recent years has been around 1880. Hence, 2220 is a good target to pursue. It is absolutely minimum for nutrition. The more difficult part of computing the national food requirement is to determine how many of the required calories should be derived from which kind of food. It has to be in conformity with the dietary habit of the people which refers to the items of food that the majority population take regularly. The suggested diet has to be nutritionally balanced and at the same time the quantities of food must be enough to fill up the stomach. The dietary composition suggested by the four organizations mentioned above are shown in Table 1.

Taking into consideration the nature of the existing problem of malnutrition on the one hand and the potentials for increasing the domestic production of food on the other, I suggest here a dietary composition as shown in Table-2. For comparison, I have shown the recommended Indian diet and the actual Japanese diet side by side.

Table 1. Average daily calorie requirements and dietary composition (grams per capita) proposed for Bangladesh by different organizations:

Kind of food	NNC 2700 cal	FAO 2332 cal	IPHN 2200 cal	PC 1900 cal
Cereals	397	408	394	394
Pulses	112	74	58	28
Meat	16	37	15	29
Fish and egg	116	26	29	29
Milk	64	99	58	29
Sweeteners	29	34	29	29
Oil	6	17	15	10
Vegetables including roots and spices	634	355	233	256
Fruits	56	31	29	29
Total	1467	1070	874	775

It is desirable to say a few words to justify my proposal on dietary composition. Predominance of food items of plant origin in the proposed diet is evident. This is simply because such items are easier and cheaper to produce. At present the cereal requirement of the country is officially calculated

Table 2. Dietary composition proposed for Bangladesh (All figures in grams per capita per day)

Food items	Proposed for Bangladesh Quantity Calorie		Actual in Japan Quantity Calorie		Recommended for India Quantity	
	Quantity	Calorie	Quantity	Calorie	Quantity	Calorie
Cereals	425	1520	316	1106	376	68
Pulses	40	137	23	79	68	38
Fish/Meat/Egg	80	106	190	252	38	38
Milk	45	30	162	108	189	39
Oil	20	180	35	315	39	39
Sweeteners	30	116	68	263	38	38
Fruits	60	30	110	58	40	40
Vegetables including roots and spices	300	100	364	138	246	246
Total	1000	2220	1268	2319	1030	1030

at the rate of 454 grams (16 ounces) per capita per day. Actual consumption may even be higher. It should be mentioned that in all other rice eating countries the consumption of rice is much lower than 425 grams. People of Bangladesh eat more rice primarily because

overnight. Changes have to be brought about gradually by making other foods available as needed. It may take years before the suggested target of 425

grams of cereals is achieved. In my proposal, foods of animal origin have been kept at a minimum. There are two reasons for recommending 300 g vegetables. Firstly, the potential for producing vegetables is higher than other foods and secondly, problems of micro nutrient deficiency can be easily solved through increased consumption of vegetables. As many as three or even four crops of vegetables can be produced in a year on the same plot of land. According to nutrition experts, at least 10 per cent of the calorie must come from fats and oils in order that fat soluble vitamins (A and D) can be easily assimilated in the body. The need for oil thus increases with an increase of foods of plant origin in the diet. Twenty grams of oil is therefore the barest minimum.

National Demand for Food and Availability

Having determined the average per capita requirement, the rest is simple arithmetic to estimate the national demand. Calories to be derived from different sources have been calculated on the basis of edible parts of foods and this fact should be kept in mind while planning production. The estimated requirements of food needed to

Table 3. Total requirement, local production and total availability of different food items in 1995-96. (All figures in metric tons)

Items	Requirement Tons	Local production	Total availability
Cereals	18,847,685	19,100,000	20,729,000
Pulses	1,773,900	500,000*	725,000
Fish/Meat/Egg	3,547,800	?	1,586,903**
Milk	1,995,637	1,500,000	1,942,720
Oil	886,950	75,000	500,000
Sweeteners	1,330,425	1,200,000	1,300,000
Fruits	2,660,850	1,450,000	1,490,000
Vegetables including roots and spices	13,304,250	3,128,000	3,208,000

* Actual production in 1995-96 was 4 lakh tons but 5 lakh tons are average annual production.
** Fish 10 lakh, meat 5 lakh and egg 82 thousand tons (approx.)

UNDP Cites Asia's "Human" Breakthroughs

Jenny S Santiago writes from Manila

Government in Asia have not just stressed the quality but also the quantity of growth by investing in human capital

HUMAN development in Asia has outstripped other parts of the world. At the same time, 100 countries, including well-off Canada, Iceland and Finland, are seeing slippage in their status. These are some of the key findings of the Human Development Report 1996 (HDR) published by United Nations Development Programme (UNDP).

The surge in economic growth in 15, mainly Asian countries, was clocked "at rates much higher than any seen during the two centuries of industrialisation in the West". This ranged from 3.5 per cent a year in Malaysia to 8.2 per cent in China and the Republic of Korea.

Once again, Canada topped the annual HDI ranking. Of 174 developed and developing countries, 57 are in the high human development category, 57 in the medium category, and 48 in the low category. Asia's largest industrial country, Japan, has the highest HDI of 0.938 throughout Asia. Tokyo ranks No. 3 in overall HDI rating worldwide.

Of 174 countries in the HDI list, seven from Asia made it to the high human development category. These were: Japan (No. 3), Hong Kong (No. 22), Republic of Korea (No. 29), Singapore (No. 34), Brunei Darussalam (No. 36), Thailand (No. 52) and Malaysia (No. 53).

India failed to turn economic growth to the advantage of the people. Despite their growth, job opportunities contracted. Korea invests \$ 160 per person a year in education and health and Malaysia, \$ 150, while India invests only \$14 and Pakistan \$10.

The Daily Star Entertainment Guide

Tuesday 3rd September
(All programmes are in local time. There may be changes in the programmes).

BTV
3:00 Opening Announcement Al-Quran Programme Summary
3:15 Recitation From the Gesela
3:15 Documentary Film: Cinema Europe
4:00 News in Bangla 4:15 Esho Para Shikhi 4:45 Cartoon Series: The Animals of Parthwood
5:00 News in Bangla 5:20 Sangeta: Modern Songs
6:00 News in Bangla 6:05 National Television Debate Competition 7:00 The News 7:30 Open University 7:25 Comedy Series: Seinfeld
8:00 News in Bangla 8:40 Drama Serial 10:00 News in English 10:30 Ghare Bairey 10:55 Mini Series 11:30 News in Bangla 11:35 Wednesday's programme 11:40 Close down

BBC
6:00am BBC Newsroom inc. World Business Report/Asia Today/24 Hours 7:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
8:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
9:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
10:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
11:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
12:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
1:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
2:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
3:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
4:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
5:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
6:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
7:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
8:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
9:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
10:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
11:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours
12:00 BBC Newsroom inc. World Business Report/Asia Today/24 Hours

CHANNEL V
6:30am Frame By Frame 7:00 Rewind VJ Sophia 8:00 Jump Start VJ Trey 9:00 Frame by Frame 11:00 The Vibe VJ Trey beach volleyball 12:30am By Demand VJ Trey 1:30 Rewind VJ Sophia 2:30 First Day First Show 3:00 The Indian Top 10 4:00 Planet Ruby 4:30 By Demand VJ Trey 5:30 Rewind VJ Sophia 6:30 Big Bang VJ Alessandra 8:00 Planet Ruby 9:00 The Vibe 10:00 First Day First Show 10:30 Soul Curry 11:00 Spook Easy 11:30 The Ride VJ Trey 12:00am Over The Edge VJ Sophia 12:30 Big Bang VJ Alessandra 1:00 Haysat 2:00 By Demand VJ Trey 3:00 Big Bang VJ Alessandra 4:30 Bill Board VJ Countdown

STAR PLUS
6:30am Voltorn 7:00 Teenage Mutant Ninja Turtles 7:30 G.I. Joe 8:00 Saber Rider And The Star Sheriff 8:30 The New Adventures Of Black Beauty 9:00 Aerobics O Style 9:30 Nanny and The Professor 10:00 Mr. Beavers 10:30 Yan Can Cook 11:00 E! For Your Entertainment 11:30 Gabrielle 12:30 Santa Barbara 1:30 The Bold & the Beautiful 2:00 The Oprah Winfrey Show 3:00 Remington Steele 4:00 Yan Can Cook 4:30 E! For Your Entertainment 5:00 Teenage Mutant Ninja Turtles 5:30 The New Adventures Of Black Beauty 6:00 Lost In Space 7:00 Home and Away 7:30 Charles in Charge 8:00 MASH 8:30 Chicago Hope 9:30 The Extraordinary 10:30 The Bold & the Beautiful 11:00 Santa Barbara 12:00am The New Twilight Zone 12:30 Baywatch 1:30 Krikati 2:00 E! For Your Entertainment 3:00 The Oprah Winfrey Show 4:00 Hoopmanor 4:30 Home and Away 5:00 The Sullivan 5:30 Gabrielle

STAR Sports
6:00am Live US Open Tennis

ZEE TV
5:30 Suno Bhai Suno 6:00 The News 6:30 Jagran 7:00 ZED 8:30 Hum Honge Kaamyab 9:00 Insight 9:30 Gaane Anjaane 10:00 Namaste India 10:30 Graviera Ki Umeed 11:00 Close Up Antakshri 11:30 Nimra Aaha 12:00 Toi Moi Ke Bol 12:30 Mr Minto 1:00 ZED 1:30 Asian Sky Shop 2:30 Kurukshetra 3:30 Zaika Ka Salar 4:00 Heroic Aashiyana 4:30 Aur Ek Minute 5:00 ZED 5:30 Cartoon 6:00 Positive Health Show 6:30 Through The Gears 7:00 Captain Cook Shaahi Dawat 7:30 Gaane Anjaane 8:00 Aap Ki Pasand 8:30 Hum Paanch 9:00 Sallaab 9:30 Tara 10:00 Harroon 10:30 The News 11:00 Gharounds 11:30 Dastaan 12:00 Darar 12:30 TVS Sa Re Ga Ma 1:30 Galaxee 2:00 Arabi Programme 2:30 TMM 4:00 Surtail 4:30 Hum Zameen 5:00 Jagran

PTV
8:00 am Nilawat Aur Tarjuma /Ham/Naat 8:20 Cartoon 8:30 Khabrain 8:45 Beauty Care 8:50 Fun Kadha 9:10 Dhanak & Health Tips 10:05 Har Taan Heli Deepak 10:30 English Film: Home Improvement 10:55 Miji Naghma 11:00 Khabrain 11:10 Anis (Serial) 12:00 Sports Hour 12:55pm Quran-e-Hakeem 1:02

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EL TV
00:30am Helen Special 01:30 Music Time 02:30 Ched Chad 03:30 Jazbaat 04:30 Bacche Man Ke 05:30 Helen Special 06:30 Music Time 07:30 Ched Chad 08:30 Jazbaat 09:30 Bacche Man Ke 10:30 Apabi 11:30 Newswire 12:00 Meri Marzi 12:30 Amalabhaa Special 2:00 Music Time 3:00 Karz 3:30 Abhantri 4:00 Kai Bhi Aye 4:30 Upanyas 5:00 It's My Choice 5:30 Oh Dekhe Dekhe 6:30 Dardmendra Special 7:30 Daane Anar Ke 8:00 Film Chait 8:20 Haseen Pal 8:30 Number 1 9:00 Oriem Hit Thi Hai 9:30 Instinct Purush Kaheta 10:30

SONY ET
8:30am Gaane Jaane Jaane 9:00 The Three Stooges 9:30 Dennis The Menace 10:00 I Dream Of Jeannie 10:30 Public Keys Bola 11:00 Pohchan 11:30 Cine Matinee-Hindi Feature Film 2:30 Kismet 3:00 Zamin Asman 3:30 Meri Message Meri Geet 4:00 Surf-Wheel Of Fortune (Game Show) 4:30 Jai Bir Hanuman 5:00 10 Civil Lines 5:30 The Three Stooges 6:00 Meri Message Meri Geet 6:30 Dennis The Menace 7:00 Premier 7:30 I Dream Of Jeannie 8:00 Surf-

DD 7
10:00 Jannudin 10:35 Classical Music 11:00 Ghare Baire 12:30 Prachir (Serial) 1:00 Janani (Serial) 1:30 TBA 2:00 TBA 2:30 Batayan (Serial) 3:00 TBA/Nirjan Dupure Premier Gaan 3:30 Dik Darshan 5:05

ZEE CINEMA
6:30 Hit Hai Fil Hai 7:00 TBA 9:00 Film Baaten 9:30 Film 12:15 Amne Samne Analkash 12:30 Film 3:15 Songs 3:45 Film 6:30 Film 9:15 Songs 10:00 Film 12:45 Film 3:30 Film Baaten 4:00 Film

Garfield
by Jim Davis

Garfield: "HMMM. INTERESTING LETTUCE"

Garfield: "THERE'S A PHRASE YOU DON'T HEAR EVERY DAY"

James Bond
BY AN FLEMING
DRAWING BY MORAK

MISSED AGAIN, PACE... BUT I WON'T CLOSE ENOUGH TO DRILL YOU!

A-AH!