Nutrition-secure India – How do we get there? Nutrition conclave discusses the way forward*

The first task of independent India must be to eliminate hunger. This was the vision of Mahatma Gandhi, the much revered ‘father of the nation’. Sixty years down the line when Gandhiji’s birthday is being celebrated as International Day of Non-Violence, we ask ourselves ‘Can there be peace where there is hunger and malnutrition?’ India has the dubious distinction of being a country with largest number of malnourished people in the world. Recent surveys\(^1\) show that almost 50% of children and practically the same number of women suffer from protein calorie malnutrition, as judged by anthropometric parameters. Deficiency of micronutrients (vitamins and minerals) – the hidden hunger, particularly iron deficiency anaemia (70% of women and children) – continues to kill women of child-bearing age and undermines the productivity of the country. Why have our economic and scientific achievements bypassed the masses and inequities between haves and have-nots increasing?

India, being a country in transition, is currently facing the double burden of both pre-transition and post-transition diseases. On the one hand, large numbers continue to suffer from pre-transition diseases like malnutrition and infectious diseases, AIDS being a new entrant. Increasing numbers are suffering from post-transition, lifestyle-related diseases like obesity, hypertension, diabetes, cardio-vascular diseases and cancer. In fact, there is a link between the two. According to the ‘Foetal origins of adult diseases’ hypothesis\(^3\), those who have suffered malnutrition in the intrauterine stage and are born with low birth weight, are more susceptible to degenerative diseases later in life – perhaps due to altered body composition and foetal programming.

Babies born with low birth weight have higher content of fat in their body, the so-called ‘lean fat babies’\(^2\). These individuals are sitting ducks for diseases, typical of affluent lifestyles – lack of physical activity and faulty diet. Thus by addressing the problem of childhood malnutrition, or nutrition of females from early age, our country can help reduce not only malnutrition and its adverse short-term consequences like morbidity and mortality, but also reduce the burden of degenerative diseases. As it is, India is the diabetes capital in the world. Almost 20% of urban children are overweight or obese\(^4\).

Nutrition is not a ‘stand alone’ subject. Nutritional goals can be achieved only with an interdisciplinary approach, where professionals and grassroot workers from the fields of nutrition and dietetics, health and medicine, agriculture, animal husbandry, environmental sciences, education, and social sciences provide the scientific and technical back-up, and politicians, bureaucrats, private sector and NGOs ensure that scientific wisdom is turned into policies and programmes.

Thanks to the green revolution, India did achieve sufficiency in cereals such as rice and wheat at the national level. However, national food security did not translate into household and individual nutrition security. The latter implies availability of balanced diet comprising cereals and millets, pulses, vegetables and fruits, and animal products. Despite adequacy of stocks, household and individual food security could not be ensured, due to inefficiencies of purchasing power and distribution. Since the mid 1990s, the productivity of these staple grains has also come down, perhaps due to green revolution fatigue. This is a cause for worry. Resource-intensive green revolution technologies have resulted in some environmental problems which now need to be reversed.

Unfortunately, the green revolution bypassed the more nutritious but orphan foodgrains like pulses, which are the major source of proteins in vegetarian Indian diets, as well as millets like sorghum (jowar), pearl millet (bajra), finger millet (ragi) and many other smaller millets which were the staple for many populations living in dryland areas. Their yields have stagnated and per capita availability has come down (Figures 1 and 2). Millets are richer in micronutrients like minerals and B vitamins than rice (Table 1) and are also rich in fibre, whose intake is good for health. It helps reduce serum cholesterol. The area under millets cultivation has come down drastically. The two major reasons for this unhealthy agricultural trend are: scientific neglect and lack of financial support in terms of subsidy for cultivation and lack of support price for procurement of these orphan foodgrains, unlike rice and wheat. These crops were confined to the poorest dryland areas. Experts say that with some inputs in terms of

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of fertilizers and water, yields can be substantially improved even with the available varieties of sorghum. In fact, the green revolution for sorghum in Andhra Pradesh preceded that for the fine grains. But later it languished.

India is the largest producer of milk and second largest producer of vegetables and fruits. There has been substantial increase in poultry. Still access to vegetables, fruits and animal products to the poor is low for a variety of reasons.

Country-wide surveys conducted by the National Nutrition Monitoring Bureau show that: (1) Indian diets are qualitatively deficient in micronutrients due to inadequate intake of vegetables, fruits, pulses and millets, and (2) within a family, diet of infants and children is more deficient than that of adults. The latter indicates lack of awareness among the mothers, because if there is food for adults, there should be food for children whose requirement is comparatively less. Green leafy vegetables are a rich and cheap source of all micronutrients as well as health-promoting phytochemicals. They can be grown throughout the year, but lack of appreciation of this rich source, both among the scientists and public has led to its neglect. Again, a case of lack of awareness, and indifference to something which is not elitist.

The three ‘A’ approach of Awareness, Access and Affordability has to be adopted. Awareness has to be at all levels: community, providers (politicians, bureaucrats), professionals (agriculture, health, education, social science), NGOs, etc. Access has to be for food, healthcare, and safe environment and drinking water. Underpinning is education and affordability. Apart from government schemes like special feeding programmes and public distribution system, livelihood opportunities are important.

The National Nutrition Conclave: This conclave is the combined initiative of M. S. Swaminathan (M.S. Swaminathan Research Foundation (MSSRF), Chennai), George Deiken (USAID, American Embassy, New Delhi) and N. K. Ganguly (ICMR, New Delhi). It was designed to tap into the wisdom of diverse groups of professionals committed to improving nutrition in India, including representatives from Government service, NGOs, academia, the press, the corporate sector, the United Nations and bilateral agencies. The objectives were: (1) To facilitate new and creative thinking. (2) To produce a short list of priority actions for improving nutrition security in India. (3) To re-energize the expanded nutrition community and increase collaboration and commitment to take the selected actions forward. The approach used was: (a) Use the evidence – what is working and what is promising. (b) Produce a documentary to foster change and commitment by holding interviews with leaders and stakeholders. (c) Organize national nutrition conclave, using the method of open space technology. (d) Follow-up action – a coalition for sustainable nutrition security in India, led by Swaminathan. Incorporate recommendations in the XI Five-Year Plan, where there would be interdepartmental action.

Participating in the conclave meeting at the MSSRF, where open space technology was used, was an interesting experience. This method does not rely on presentations, speeches, or formal leadership. It invites participants to consider critical questions or issues, set the agenda and identify the best way forward. Participants were asked to write down questions/issues that they would like to discuss. These were discussed in small groups, with freedom to move between groups. The recommendations were compiled the same evening as a document. On the final day, salient findings/recommendations were further discussed, and the Chennai Declaration emerged. Among the 36 issues that were flagged, 16 pertained to management, governance and policies. Three groups discussed different aspects of awareness generation and training programmes. Only two groups discussed food security and one group discussed medical aspects. In fact, the conclave had thin representation from agriculture and medical professionals. The other aspects discussed were monitoring, water and sanitation, gender equity and rights, and nutrition for special groups like infants, tribal and slum-dwellers.

The demands made in the Chennai declaration were:

- Call for nutrition to be a priority on the national agenda. This includes creating a ‘home’ for nutrition, such as a National Nutrition Authority. This group could lead and coordinate nutrition programming. Create a Parliamentary committee, including a group of concerned Ministries working in the area of nutrition, as the coalition for sustainable nutrition security in India.
- Call for Citizen’s charter on nutrition endorsed by policy makers and leaders to ensure that nutrition is a national priority.
- Call for preparation of a white paper by a multi-sectoral expert group to present the compelling case for nutrition as

![Figure 2](image-url). Per capita availability of foodgrains. Source: Report of the Steering Committee on Nutrition for the Tenth Five-Year Plan, Government of India, Planning Commission, 2002, p. 11.

<table>
<thead>
<tr>
<th>Grain/nutrient</th>
<th>Bajra</th>
<th>Jowar</th>
<th>Ragi</th>
<th>Rice (milled)</th>
<th>Maize</th>
<th>Wheat flour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protein (g)</td>
<td>11.6</td>
<td>10.4</td>
<td>7.3</td>
<td>6.8</td>
<td>11.1</td>
<td>12.1</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>42</td>
<td>25</td>
<td>344</td>
<td>10</td>
<td>10</td>
<td>48</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>8</td>
<td>4.1</td>
<td>3.9</td>
<td>3.2</td>
<td>2.3</td>
<td>4.9</td>
</tr>
<tr>
<td>Zinc (mg)</td>
<td>3.1</td>
<td>1.6</td>
<td>2.3</td>
<td>1.4</td>
<td>2.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Vitamin B1 (mg)</td>
<td>0.33</td>
<td>0.37</td>
<td>4.2</td>
<td>0.06</td>
<td>0.42</td>
<td>0.49</td>
</tr>
<tr>
<td>Vitamin B2 (mg)</td>
<td>0.25</td>
<td>0.13</td>
<td>0.19</td>
<td>0.06</td>
<td>0.10</td>
<td>0.17</td>
</tr>
<tr>
<td>Folic acid (µg)</td>
<td>45.5</td>
<td>20</td>
<td>18.3</td>
<td>8.0</td>
<td>20</td>
<td>36.8</td>
</tr>
</tbody>
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a national priority, including the costs of the problem, and to propose a coherent framework and sustainable action plan.

- Call for a national strategy for nutrition of children under two that would focus on vulnerable and marginalized groups. This strategy should foster policy convergence and programme integration as well as focus on infant and young child feeding.

- Call for nutrition security focus on the urban poor. This must increase the identification and mapping of unlisted slum clusters, promote a network of agencies working in urban health and nutrition, which should identify lead programmes that can serve as prototypes and learning sites, and work to activate the media as advocates for improving urban health and nutrition.

- Call for improved monitoring and evaluation of nutrition programming, including ICDS, increasing its focus on measuring nutrition outcomes. States should set up specific systems for monitoring nutrition outcomes.

- Call for more focus on nutrition education, communication and awareness. An appropriate core committee led by the Government, to arrive at nationally accepted key nutrition messages, a public-private partnership for a national nutrition education campaign, and a set of monitoring indicators to monitor the campaign should be established.

All the participants pledged their personal commitment toward these objectives and also to work together in this effort.

A one-day symposium on ‘Where hunger rules, peace cannot prevail – A road map for a hunger-free, nutrition-secure India’ was held at the National Academy of Agricultural Sciences. The symposium was chaired by M. S. Swaminathan and inaugurated by Renuka Chaudhury, Minister for Women and Child Development. Swaminathan mentioned the purpose of his recent initiative of the nutrition conclave leading to the Chennai Declaration (discussed above). The challenge of combating malnutrition, and details of the Declaration were presented by the present author in the inaugural session.

Renuka Chaudhury promised to address the problem of malnutrition using multidimensional approach, with proper involvement of the media to generate awareness. Steven J. White (US embassy) pledged international support for nutritional security in India. T. Ramanthy (DST, New Delhi) highlighted DST’s efforts in addressing the problem of safe drinking water.

The keynote speakers included Arjun K. Sengupta (National Commission for Enterprises). He described the role played by the unorganized sector in promoting livelihood. Shobhna Bharatia (Hindustan Times) spoke on Alliance of Civilizations. Brinda Karat made a case and a fervent appeal to universalize the Public Distribution System (PDS) rather than targeting it only to those below the poverty line. The idea should be to make the PDS more efficient rather than shrinking its scope. A number of scientists and bureaucrats discussed the issue of availability, access and absorption of food. While supporting the idea of agricultural diversification, Sanjaya Rajaram (ICARDA) warned against neglect of wheat, whose production seems to be decreasing. M. I. Madan (Veterinary University, Mathura) and S. Ayarjan (ICAR) discussed the potential of livestock and fisheries respectively, for income generation and nutrition security. Meenakshi Ghosh (Department of Panchayati Raj) described the successful model of Mitanin as agents of change in Chhattisgarh. Sunita Narain (CSE, Delhi) highlighted the serious problem of water availability and pollution, unless innovative methods of conservation are applied. Jayati Ghosh (JNU) discussed the genesis of farmers’ suicides, and what needs to be done to stop them. Satinder Bajaj, a nutritionist, discussed the vicious cycle of nutrition and infection, and the need for a healthy environment.

According to Abhijit Sen (Planning Commission), the problem is not of food production, because during the years that food production went up, malnutrition did not come down. This argument can be questioned. Increased food production did bring down routine famines and reduced severe clinical forms of malnutrition. The problem of affordability to buy food, corruption in PDS, etc. need to be addressed.

Thus diverse and sometimes conflicting opinions were expressed. Let us hope that the different views would gel into a cogent action plan when the coalition for sustainable nutrition security in India is formed and we are able to ‘walk the talk’. This can happen only if health, nutrition and education become indicators of national development. Economic indicators and strategies should sub-serve these social goals rather than the latter being the trickle-down beneficiaries of economic development. Otherwise, India will continue to be the most malnourished country in the world, with its position at the bottom of the nations in terms of social indicators, despite the gains of democracy and spectacular economic growth.


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