

PROJECT REPORT

Development of Nutrition Science in India and Research Approaches to Food and Nutrition Problems of the Country (in two volumes) by B S Narasinga Rao

The above project was sponsored by the Indian National Science Academy during the financial year 1994-99. Dr Narasinga Rao was inspired to take up this study at the time of Platinum Jubilee Celebrations of the National Institute of Nutrition (NIN) formerly known as Nutrition Research Laboratory, Hyderabad in 1983. Since he was closely associated with the NIN for four decades (1950-1990), he considered it best to highlight the nutrition research in India by writing a monograph. The final report is now available to the Academy and is complete in two volumes.

The diet and dietary habits, according to Dr Rao, are directly related to the environmental conditions, climate and locally available foods, both naturally occurring and cultivated. It has also been influenced by socio-cultural or religious beliefs which have been undergoing changes over centuries. The diet that is consumed in India today has evolved over 5000 years. There is evidence to indicate that several of the foods which are taken today were consumed even during the Indus Valley Civilizations, dating back to 3000-5000 B.C. The concepts of diet and their role in diseases developed by the ayurvedic physicians of that time were far more advanced and scientific than those prevailing in other contemporary civilizations in other parts of the world. The concept of quality of food, their role in daily diet in relation to health of an individual and their use in the management of diseases, was evolved and got importance in the dietary science. Some of these ancient concepts on food and diet have been the subject of study in recent years using the approaches of modern scientific research.

Nutrition has been a major health issue in India for centuries. There had been recurrence of famines periodically in India (in 1777, 1880, 1885 and 1946) which largely contributed to malnutrition.

Nutrition research in India has been nurtured and supported by several National Science Organisations. The Indian Research Fund Association (IRFA) was the main organisation which supported nutrition research as a part of medical research in the country. The other organisation which supported research in food and nutrition prior to 1950 were Imperial Agriculture Council (now ICAR) and nutrition units of the Provincial Medical and Health Departments. After 1950, ICMR continued to promote and expand nutrition research in the country. Research in food and nutrition was also supported by CSIR, DST, DBT, DAE, DRDO, Ministry of Health, ICAR, Food and Nutrition Board of Agricultural Ministry, and later on by the Department of Women and Child Welfare. International Organisations like WHO, FAO, UNICEF, IDRC, USAID, World Bank, DANIDA, WPO, SIDA, ODA and Food Foundation have sponsored and supported research on the problems of nutrition. Some of these agencies (ICMR, CSIR and DRDO) have been supporting and fully funding research institutes devoted entirely to basic and applied in nutrition, food science, food technology and food toxicology like, NIN, CFTRI, DFRL, FDTRC, ITRC etc. These organisations have also been funding multicentric, multidisciplinary collaborative research programmes on major nutrition problems of the country involving different leading research scientists and institutes, research centres and some of the departments of the universities. Their objectives are mainly to find solutions for combating i) major nutrition problems of the country like PEM, anaemia, goitre, Vitamin A deficiency, ii) health and nutrition of vulnerable groups like women, infants and children, iii) food borne toxins and food contaminants, their toxic and health implications and their control and prevention, and iv) interaction of nutrition and environment.

The present monograph is prepared in two volumes. First volume comprises 13 chapters and highlights the development of science in general during 18-19th centuries and nutrition science in particulars, during late 19th and 20th century. The contributions are of nutritionist, biochemists, medical scientists, agriculturists and the social scientists. The second volume describes in detail the contributions of nutrition research in India with special reference to the major food and nutrition problems of the country.

The following are the contents of the monograph given chapterwise of Volume I & II.

Volume I

1. Preface to the Development of Concepts in Food and Nutrition and of Nutrition Research in India
2. Ancient Concepts of Food and Nutrition and their Relevance to Modern Nutrition Research in India
3. The Beginning of Modern Science in India
4. History of Medical Research in India and the Beginning of Nutrition Research
5. Progress and Development of Nutrition Research in India - Historical Perspective: Pre-independence period 1900-1950
6. Development of Progress of Scientific Research in General and Nutrition Research in particular in India - Post Independence Period
7. Role of ICMR in Sponsoring and Promoting Nutrition Research in India during 1950-1965
8. Role of ICMR in Promoting and Supporting Nutrition Research in India : 1965-1995
9. Nutrition Research Laboratories, Development and Highlights of its Contribution to Nutrition Research during 1945-1970
10. The Contributions of National Institute of Nutrition to Nutrition Research and Development in India during 1971-1983
11. The Contributions of National Institute of Nutrition to Nutrition Research and Development in India during 1984-1998
12. The Contributions of other Scientific Institutions and Research Centres to Nutrition Research in India
13. The Role of National and International Scientific Organisations in the Promotion of Nutrition Research in India

Bibliography

Volume II

14. Nutrient and Non-nutrient Composition of Indian Foods
15. Nutrient Requirements, Recommended Dietary Allowances for Indians and Related Research
16. Diet Surveys Among Different Population Groups to assess the Adequacy of their Diets
17. Nutrition Surveys in India to Unravel the Nutrition Problems of the Country - A Historical Review
18. Nutritional Deficiency Diseases in India during 1940-1990
19. Mild to Moderate Malnutrition, their Widespread Prevalence, their Functional Consequences, Synergistic Interaction Between Malnutrition, Infection and Environment
20. Nutrition Intervention Strategies to Combat Malnutrition
21. Diet in Health and Diseases, Diet and Nutrition in Promotion and Prevention of Chronic Diseases of Non-nutritional Origin
22. Food Toxicology and Food Safety and Endemic Diseases related to Toxins in Food, Water and Environment
23. Research Developments in Agriculture, Food Science and Biotechnology related to Nutritional Science in India
24. Studies on Nutrition Education, Communication and Socio-economic aspects of Diet and Nutrition
25. Development of Nutritional Sciences in India During the Past 100 years: Past Achievements and Future Prospects

Bibliography

The monograph is useful for upcoming nutritionists as well as for general readers.

Shabnam Shukla