

Farming System for Nutrition: A Pathway for Addressing Malnutrition in India

An initiative by M S Swaminathan Research Foundation

The Context:

One of the major issues concerning India is the persistent problem of malnutrition of children and women. Over the several decades of planned development, many different programmes and schemes have been put in place to tackle the problem of malnutrition across different age groups, from birth to old age, using a life cycle approach. In spite of all the efforts taken by the government malnutrition persists in India in an unacceptable form. This scenario is partly related to the complex nature of malnutrition with various contributory causes. Some major contributory factors of malnutrition are the nature and extent of food intake, environment and health. Any approach to address the problem of malnutrition will have to pay concurrent attention to food and non-food factors that influence nutrition status. Three types of nutritional deficiencies are observed in India: calorie deficiency due to inadequate consumption of food; protein deficiency due to inadequate consumption of pulses, milk, egg etc; micro-nutrient deficiency (or hidden hunger) due to inadequacy of iron, iodine, zinc, vitamin A, Vitamin B 12 etc. In India, a considerable section of the population, suffer from malnutrition-consisting of under nutrition, hidden hunger caused by micronutrient deficiencies and obesity. In 2015-16, 38.4 per cent of India's children, below the age of five, are stunted and 35.7 percent are underweight; one fifth of women in the reproductive age group, are estimated to be suffering from chronic energy deficiency while another one fifth are obese. Further, more than 50 per cent of children and women suffer from anaemia (NFHS, 2015-16)¹.

Given the complex nature of the problem of malnutrition, it is necessary to address the immediate determinants of nutrition as well as the underlying causes of undernutrition. That is, there is a need to focus on nutrition specific programmes addressing immediate determinants of nutrition (eg. maternal

and child health management and micronutrient supplementation) as also nutrition sensitive programmes (eg. agricultural interventions). While a range of interventions are necessary to address malnutrition, leveraging agriculture for nutrition can be an important approach in the Indian context. A majority of India's population continue to be dependent on agriculture for their livelihoods with close to 60 percent of the rural households in 2012-13, classified as agricultural households (GoI, 2014)². In a context where, a significant section of the population are malnourished and are dependent on agriculture, a pathway for addressing food and nutrition security by leveraging agriculture would perhaps have great potential.

MSSRF promotes the Farming Systems for Nutrition (FSN) as one the approaches to tackle household food and nutrition insecurity in rural India. The concept of FSN is a sustainable framework of farming, based on nutrition-sensitive agriculture. FSN, as a farmer led strategy is defined by M. S. Swaminathan as:

“The introduction of agricultural remedies to the nutritional maladies prevailing in an area through mainstreaming nutritional criteria in the selection of the components of a farming system involving crops, farm animals and wherever feasible, fish”.

“This approach calls for the integration of interventions in non-farm factors like hygiene and sanitation to improve nutrition and focus on differential human nutritional needs across gender and age groups through the life cycle”³. The FSN

¹ National Family Health Survey (2015-16): NFHS-4, India Fact Sheet.

² Government of India (2014): Key Indicators of Situation of Agricultural Households in India, NSSO 70th Round, Ministry of Statistics and Programme Implementation, December.

³ Nagarajan, S, R V Bhavani and M S Swaminathan (2014): Operationalizing the concept of farming system for nutrition through the promotion of nutrition-sensitive agriculture, *Current Science*, 107(6), pp 959-964

model is a location-specific, inclusive model based on the resource endowments and specific environment that shall address the nutritional needs of families. Underlying the concept of FSN is a principle that household food production is important to the diets of farm families, particularly small holders. In other words, a diversified food production system has the potential to diversify the consumption basket. Given that FSN is a flexible model that takes into account the nature of resource endowment, specificities in environment and nutritional problems, ideally a farmer can decide on the possible combinations of different components of FSN depending on his location. However, in as much malnutrition is related to inequality of resources, poverty and social discrimination, the FSN design will have to take these aspects into consideration.

Objectives: The major objectives of the current project are:

- To disseminate the concept of ‘Farming Systems for Nutrition’ across different stakeholders, in four selected States (Andhra Pradesh, Bihar, Maharashtra, Odisha) of India.
- To provide policy recommendations for strengthening agriculture-nutrition linkages in the selected States

Methodology:

Analysis of relevant secondary data and policies pertaining to selected states, combined with a series of consultations/roundtable discussions with different stakeholders (government officials, subject experts, farmers, civil society organisations, etc.) at different levels shall be the methodology adopted in the project.

The analysis shall focus on two major aspects: to understand the scope for strengthening nutrition sensitive agriculture in the four States; and to understand the gaps in the existing agriculture and food related policies of the four States. Broad recommendations for strengthening agriculture-nutrition linkages shall be arrived at based on the analyses.

The advocacy workshops on FSN and the recommendations for each state shall be done for different stakeholders:

- bureaucrats, officials of line departments from departments of agriculture and allied sectors, women and child development, health, social welfare (representing districts and state);
- agricultural extension officers from departments, KVKs, other institutions;
- academicians-agricultural and nutritional experts- representing major ICAR and other institutions in the state;
- civil society organisations, media personnel, farmer representatives.

