

**UNIVERSITY OF AGRICULTURAL SCIENCES, BANGALORE**

**DEPARTMENT OF AGRICULTURAL EXTENSION**

**College of Agriculture, GKVK, Bengaluru-65**

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Venue: Dr. Dwarkinath Hall

ID. No.: PAMB0027

Time: 10:30 AM

Class: III Ph. D. (Agril. Extn)

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**Seminar- III**

**SMART FOOD: Food that is good for You, the Planet and the Farmer**

**Synopsis**

In the wake of climate change and water scarcity, it is important to ensure that the Indian agriculture sector is equipped with climate-resilient approaches and crops that can survive more stressful environments to maintain food production and meet the increasing demand. On the other hand, there is a global shift towards linking agriculture and nutrition to effectively combat the issues relating to nutrition and health. This calls for an overarching need to focus on crops that are suited to meet the current environmental challenges, nutritional needs of the growing population and provide a sustainable livelihood for the farmers.

This encapsulates the definition of Smart Food, the food that fulfils all the criteria of being good for the consumer (nutritious and healthy); good for the planet (low carbon footprint) and good for the farmer (climate-resilient and survives with less water). Thus, a focus on Smart Food addresses some of the largest issues globally and in India: poor diets (malnutrition to obesity); environmental issues (water scarcity and environmental degradation); and rural poverty. Thus, the concept of Smart Food is the need of the hour and tackles many issues in a single approach. The above issues are also been emphasised by the Food and Agriculture Organization. With this backdrop the present seminar is conceptualised with the following objectives;

**Objectives:**

1. To understand the concept of Smart Food and its significance
2. To discuss various initiatives of public, NGO and private sectors on Smart Food
3. To review related research findings and case studies

**SMART FOOD and its significance**

Millets and sorghum fit the Smart Food criteria of being good for consumers, the planet and the farmer. Their nutritional benefits fulfil some of the biggest health needs. Their resilience and survival in hot, dry conditions also make them particularly significant in the light of climate change concerns. Moreover, before the dominance of the Big3 (Rice, Wheat and Maize) came about, they were the traditional staple in India and many other countries. Millets and sorghum also fit most of the big global health food trends of being an ancient grain, a super-food, gluten-free, having low Glycemic Index (GI), good for losing weight, etc. This is relevant because if millets and sorghum are to be in the mainstream and make up the Big5, they also need to be major global commodities.

**Various Initiatives of government and organizations on SMART FOOD**

In India, millet and sorghum cultivation has been strengthened by several government support schemes and research interventions. The year 2018 was declared as the 'National year of Millets' by GoI and 2023 as the United Nations International Year of Millets by UN. The key efforts to promote sorghum and millets are as follows including millets into key schemes, Initiative for Nutritional Security through Intensive Millets Promotion (INSIMP), Rain-fed Area

Development Programme (RAPD), Accelerated Fodder Development Programme, Nutri-farms Scheme, Odisha and Karnataka State Millet Mission.

- ✓ **Government Organizations;** ICAR- Indian Institute of Millet Research (IIMR), CSIR-Central Food Technology Research Institute (CFTRI).
- ✓ **Nonprofit Organizations;** M S Swaminathan Research Foundation (MSSRF), Watershed Support Service and Activities Network (WASSAN), Deccan Development Society Foundation.
- ✓ **Private Sector Millet Revolution;** Farm-to-Fork restaurants, Product manufacturers, E-commerce platforms, Breweries.
- ✓ **International Efforts;** Smart Food Initiative.

### Research studies

**Arjuman *et al.*, (2022)** examined the consumer preferences for the products of minor millets. Sample consumers were categorized into urban and rural consumers and data was enumerated from a total sample of 40 consumers comprising of 20 urban and 20 rural consumers. Finger millet was the most consumed among the urban consumers at 3.5 kg per month followed by foxtail millet at 2.5 kg per month and little millet at 2.0 kg per month. On the other hand, rural consumers consume more quantity of finger millet i.e., 5.5 kg per month followed by foxtail millet 04 kg per month, while little millet also having demand and monthly average consumption of little millet among rural people is 03 kg per month.

**Seetha *et al.*, (2019)** study was conducted in four public schools in a peri-urban region of Bengaluru Karnataka state of India, where children came from low- and middle-income families. Finger millet *idli*, *bisi belle bath* and *upma* were equally preferred recipes. There was no wastage of food during the intervention period, and the average per capita food intake during the mid-day meals was estimated to be 350 g for millet-based meals and 200 g for sambar (which is mainly served with fortified rice in regular Mid-Day Meals (MDM)).

### Conclusion:

India is in an interesting position, while it needs Smart Foods like millet and sorghum to tackle issues of malnutrition, environmental and farmer welfare issues, it also has the opportunity to be a world leader in such Smart Foods. India is not unique in these challenges and many countries can benefit from the Smart Food approach through the development of major new industries in millet and sorghum. This is a major business opportunity as well as a socio-environmental need.

### Reference:

ANONYMOUS, 2021, Report on Smart Food Initiative, ICRISAT Hyderabad.

ARJUMAN B., GANAPATHY M. S., SIDDAYYA, GIRISH M. R., SHANKARA M. H., SHAMSHAD S. B., GOVINDA GOWDA V., AND MOHAN KUMAR T. L., 2022, Consumer Preferences for the Products of Minor Millets in Tumakuru District of Karnataka, India, *Int. J. of Envir. and Cli Cha.*, 12 (11): 2214-2220.

SEETHA A., JOANNA K. P., TAKUJI W. T.A, DEEPTI T., SHWETA U., AJAY K., ASHOK J., NIDHI S. AND SWAMIKANNU N., 2019, Acceptance and impact of millet- based Mid-Day meal on the nutritional status of adolescent school going children in a Peri-Urban region of Karnataka state in India, *Nutrients*, 11 (1), 112-128.