

## Nutritious and Climate Smart Small Millets for Mitigating the Challenges of Malnutrition and Diabetes

**M. Shivamurthy**

University of Agricultural Sciences, India

Small millets have both preventive and curative properties good for addressing constipation, heart problems and type 2 diabetes suitable for preventing obesity. Small millets include, finger millet (*Eleusinecoracana*), Kodo millet (*Paspalumscrobiculatum*), little millet (*Panicumsumatrense*), foxtail millet (*Setaria italic*), proso millet (*Panicummiliaceum*), and barnyard millet (*Echinochloacolona*) and each one of them has special nutritional benefits. Small millets, perform well in marginal environments having superior nutritional properties, including high micronutrient and dietary fibre content, and low glycemic index. Despite their superior nutritional qualities and climate resilience, cultivation of small millets in India declined from 7.22 million hectares to 2.29 million hectares between 1961 and 2009, this decline in production and consumption of small millets mainly due to limited productivity, high drudgery involved in their processing, negative perceptions as a food for the poor. Through context-specific production technologies, creating decentralized processing infrastructure and local market development it is possible to bring back small millets to farms and food baskets on a wider scale. Among the children under the age of five years in India, 48 percent have stunted growth and 43 percent are underweight, likewise chronic and non-communicable diseases like Type-II diabetes and impaired glucose tolerance are on the increase. The primary factors responsible for the steep decline in the production and consumption of small millets in India are; Low productivity, high labour intensity, drudgery of agricultural operations and lack of attractive farm gate prices. Promoting small millets as cropping systems, support for timely availability of quality seed, Large scale capacity building to farmers on location specific improved production practices, creating post-harvest infrastructure and marketing initiatives are some of the strategies for enhancing production. Besides, therapeutic products targeting elites need intensive efforts for quality maintenance, consumption promotion through public support and supplying ready to cook small millet products will promote small millets in the baskets of urban elites are discussed in this paper.

### Biography:

Murudaiah Shivamurthy is A Visiting Scholar IB University of Ghent, Belgium and Humboldt State University, Berlin, Germany. At present he is Professor & Head of Agricultural Extension, College of Agriculture, UAS, GKVK, Bangalore – 560 065, India.

He worked as professor of Agricultural Extension, University of Agricultural Sciences, Bangalore from 2003 to 2016, Associate Professor of Agricultural Extension, University of Agricultural Sciences, Bangalore from 1995 to 2002, Assistant Professor of Agricultural Extension, University of Agricultural Sciences, Bangalore from 1991 to 1995.

### Publications:

Research articles 92

Articles in National and international conferences 108

Research note 04

Book chapters 04

Ph.D. students guided 9

M.Sc. Students Guided 24