

# SOUVENIR

ONE DAY NATIONAL WORKSHOP ON  
NUTRI CEREALS

16<sup>th</sup> OCTOBER 2019

**KRUSHI BHAWAN**  
Gopandhu Marg, Bhubaneswar

ORGANIZED BY



DEPARTMENT OF AGRICULTURE  
AND FARMERS' EMPOWERMENT  
GOVERNMENT OF ODISHA  
(ODISHA MILLETS MISSION)



DEPARTMENT OF AGRICULTURE,  
COOPERATION & FARMERS WELFARE  
GOVERNMENT OF INDIA  
(NFSM-NUTRI CEREAL)

SECTION - 16

DR. JOANNA KANE POTAKA  
ASSISTANT DIRECTOR GENERAL, ICRISAT

# TAKING A SMART FOOD APPROACH

Two of the biggest issues on the global agenda are nutrition and climate change. These are equally important for India. Add to this the plight of Indian farmers and we have some tough challenges. Typically, solutions for these big issues work in silos. **The Smart Food<sup>1</sup> approach is about finding solutions that are good for you, the planet and the farmer, in unison.**

The first step in achieving this is to focus on diversifying staples with Smart Foods. Given that staples are often 70% of a meal and typically refined carbohydrate, hence there is little nutrition being gained, this is where we can have big impact.

Millets and sorghum are excellent foods to target to diversify staples. They fit the criteria of being Smart Foods like the examples shown in Diagrams A, B and C.

**smart food**  
Good for you





In the past, the biggest efforts and investments have been at the growing end. As a result, there is a big gap at the consumer end which especially needs marketing to build awareness and change the image, as well as working with processors to make modern, convenient and affordable products available.

For longer term sustainability of any efforts to bring millets and sorghum into mainstream, they need to be tasty and have a positive image. Marketing, food processors, cooks and chefs play a key role in achieving this. What is often missed is that the **food processors struggle just as much as farmers**. The Small – Medium Enterprises (SMEs) are the pioneers of the millet and sorghum industry and equally deserve supporting.

**The need for marketing and tasty products are just as important when being brought into a feeding program** as it is when being made into commercially available products.

Also just including millets into a feeding program because they are nutritious, will not always be highly impactful, unless key criteria are taken into account.

Results are about to be officially released to the media of a recent pilot undertaken, which is the first known 'scientific study'<sup>1</sup> on introducing millets into school feeding, that tested the acceptance and nutritional impact. Early presentation of the results of the study are included here which was undertaken by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and Akshaya Patra.

Approximately 1,500 adolescent school children from two schools were provided a millet based mid-day meal for 3 months. Another two schools being fed the standard fortified rice and samba mid-day meals were the control group for comparison. 10% of the children were tracked for their growth rate (using anthropometry measurements) and also sensory evaluations undertaken every month to see how the children were liking each of the millet meals.

The methodology to maximize the benefits was designed based on 6 components:

1. Understanding and targeting the nutritional needs of the consumers e.g. anemia.
2. Selecting the millets that best target the nutritional needs
3. Selecting the variety of the millets highest in the required nutrients
4. Use nutritional data that distinguishes by variety and does not use averages of the nutritional level for a variety
5. Include an edu-tainment program (awareness program that is fun)
6. Especially designed menus taking into account:
  - combinations of foods
  - balancing the whole menu and diet



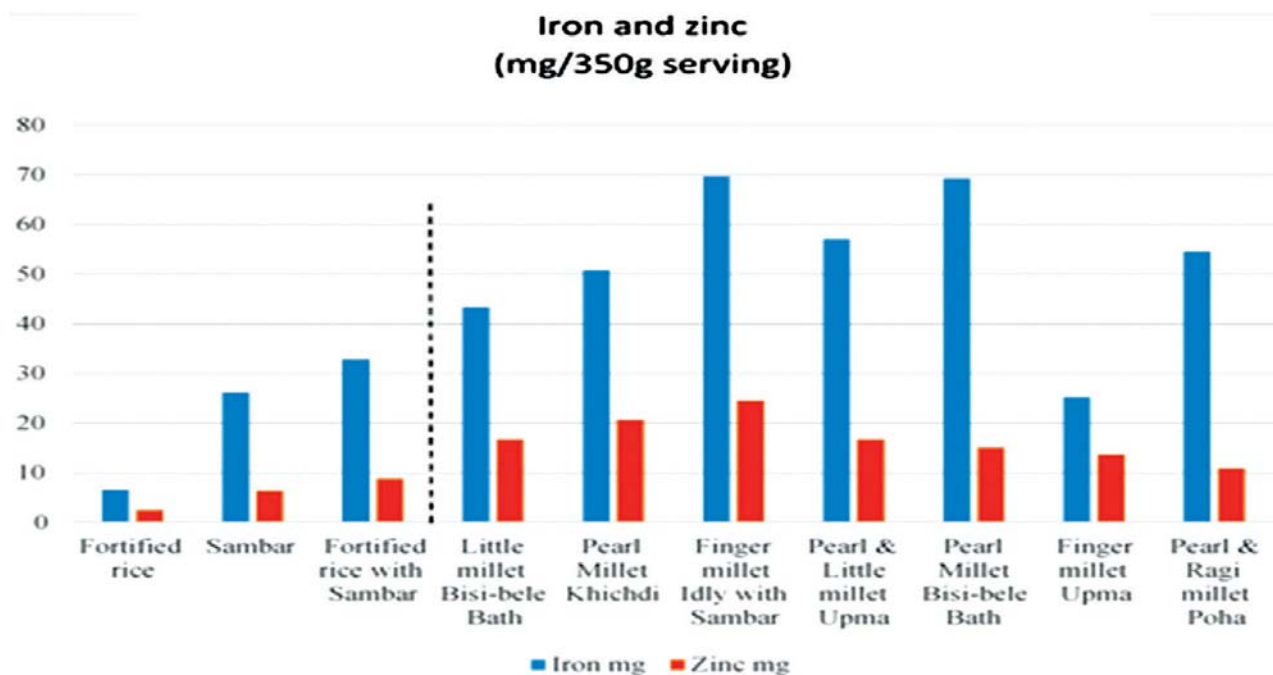
- preparation and cooking methods
- equipment and cooking skills
- cultural sensitivities and taste.

With this approach being followed, the study results, that are about to be officially released, included:

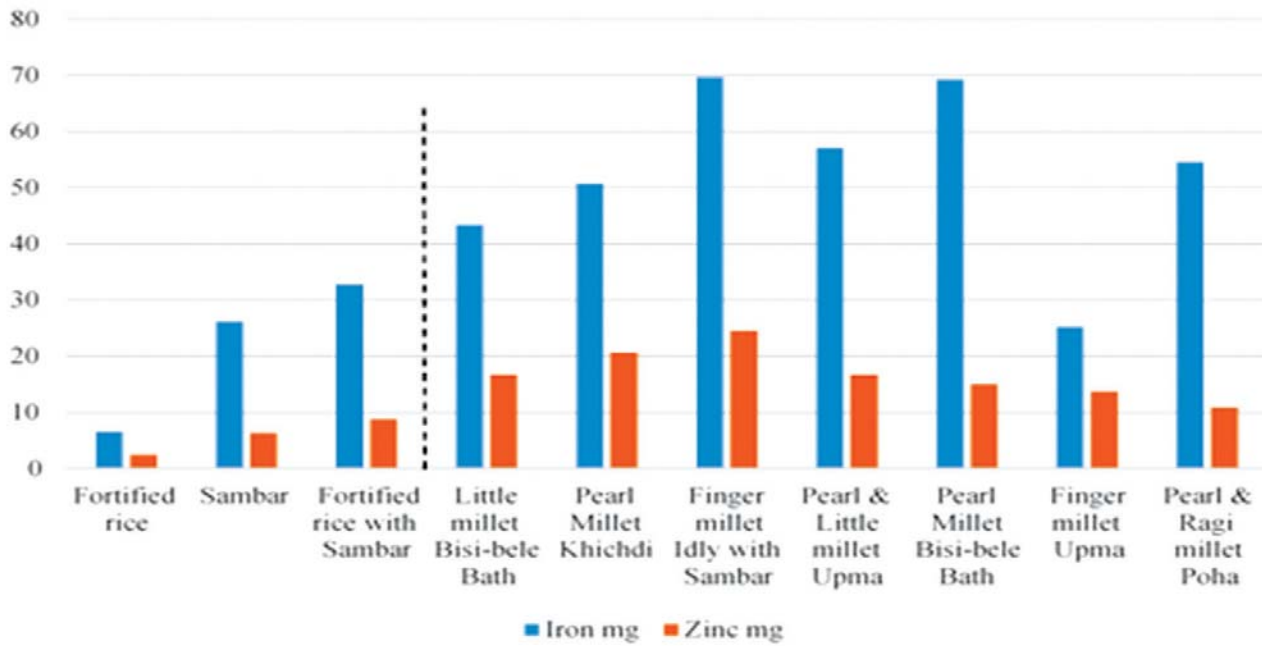
- **50% faster growth** for the children being fed the millet-based meals than those eating fortified rice-based meals, in just 3 months.
- The children rated the meals **4.5 or higher out of 5 for taste**, including eating little millet as rice.

The nutrition composition of the meals was laboratory tested – see graphs A-D. The newly designed millet based meals were significantly superior for nutrition compared to the standard meals normally served of fortified rice and sambar. Rice was not served at all during the three months, and on some days little millet was served as a rice.

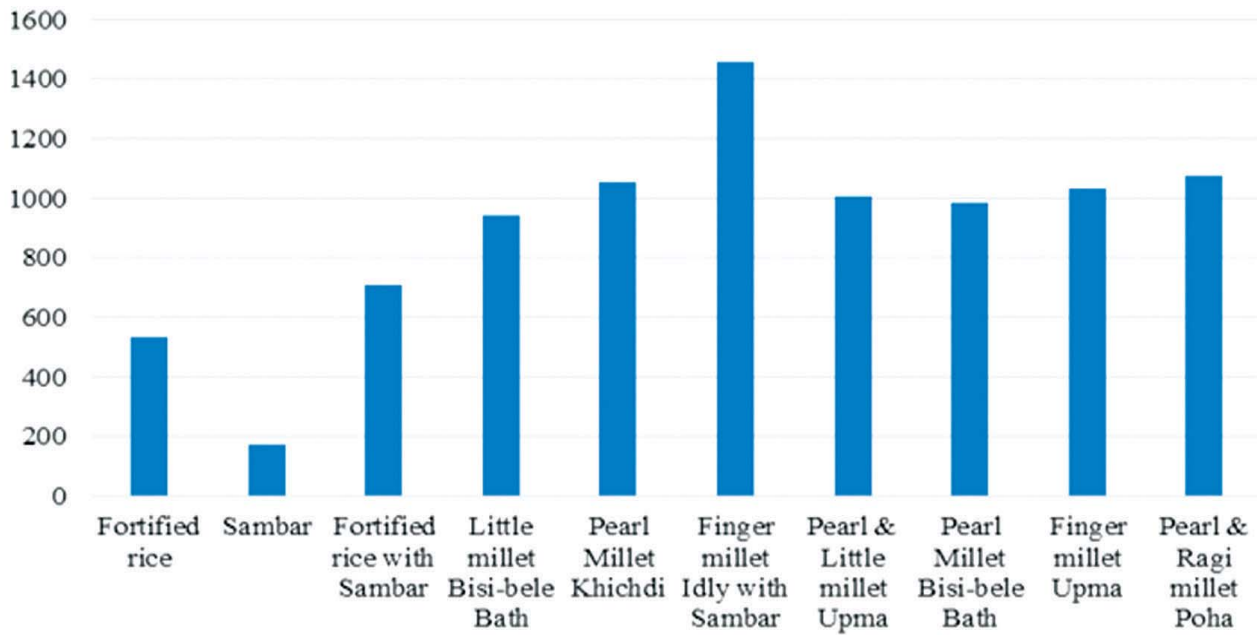
#### Graphs A-D: Nutrition composition of standard MDM of fortified rice and samba compared to the millet based MDMs.

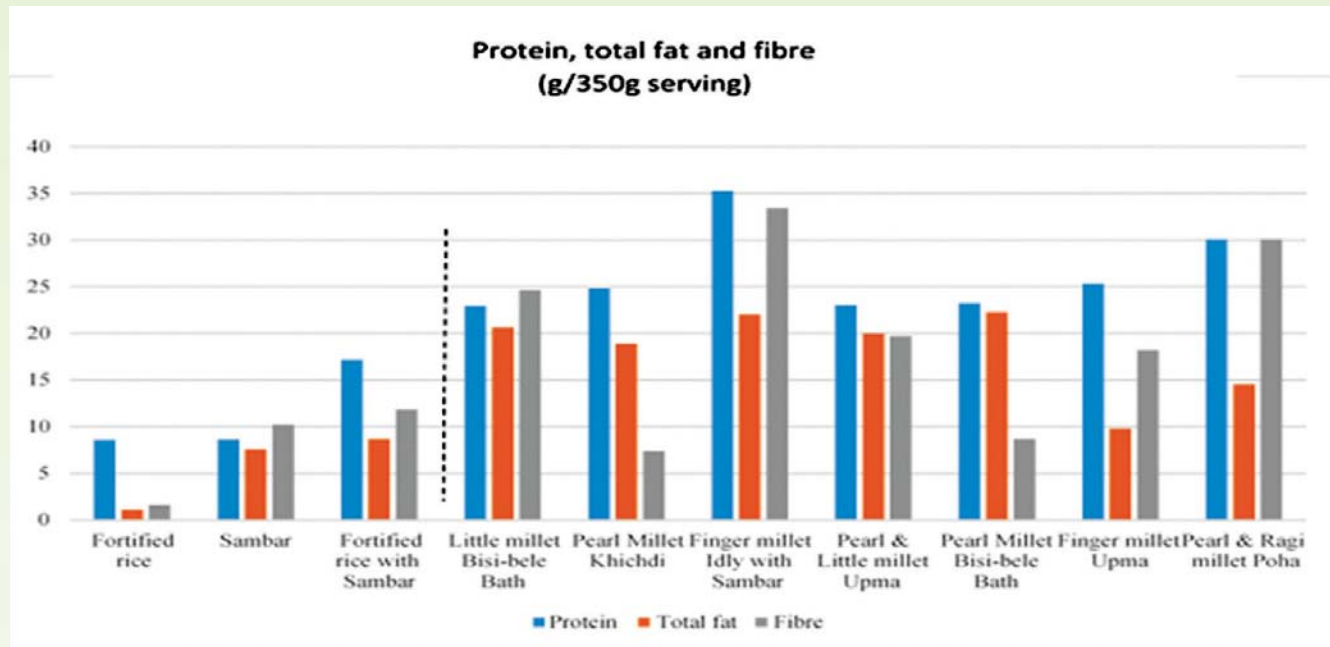


### Iron and zinc (mg/350g serving)



### Energy (Kcal/350g serving)





## MARKET APPROACHES FOR THE FUTURE

Marketing to position the image of millets and sorghum along with ensuring delicious recipes and products, are important components to popularize and mainstream millets and sorghum. This requires market testing and support.

This is important whether it is a feeding program or a commercial product. Keeping food tasty but still healthy is possible but can take extra effort. Maximizing the nutrition and health benefits also takes specific efforts and knowledge.

Now is the time to ensure Smart Food consumer foundations are in place for future growth.

