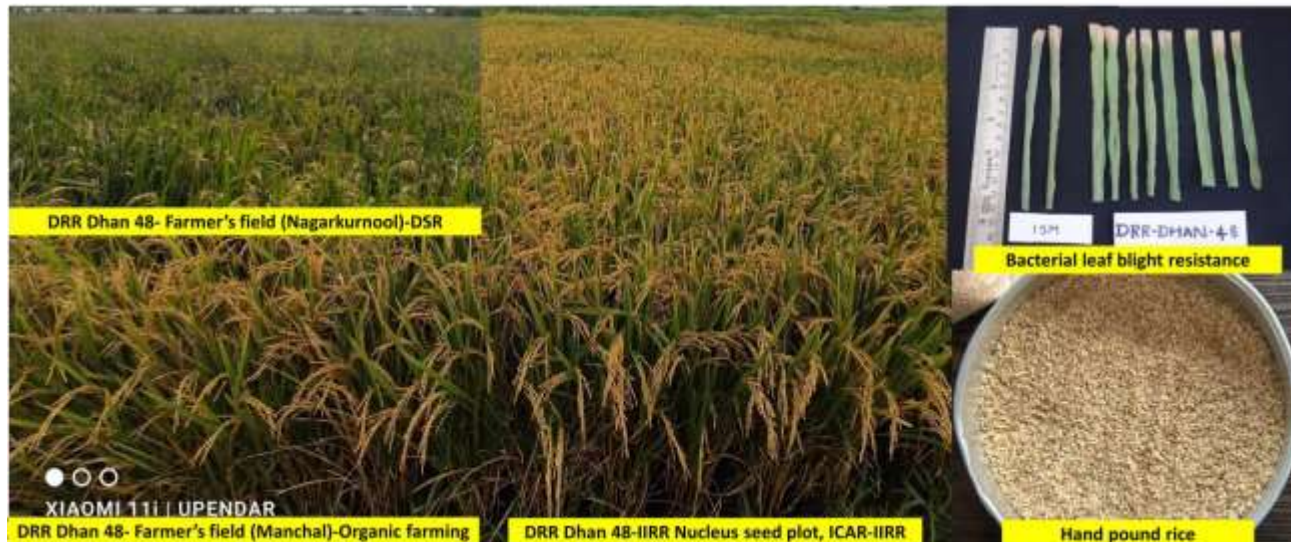
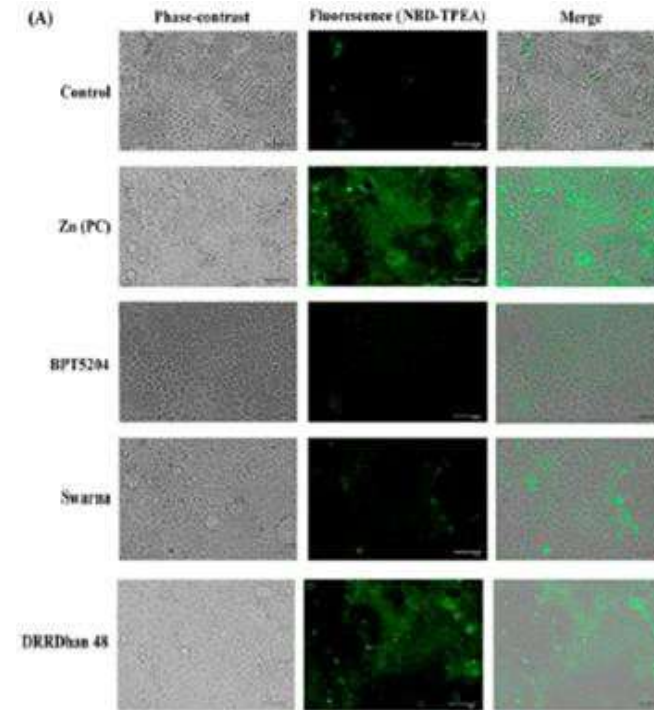


# DRR Dhan 48: A Low-Glycaemic Index, Zinc Rich, Climate Resilient, Fine Grain Elite Rice Cultivar with Bacterial Blight Resistance

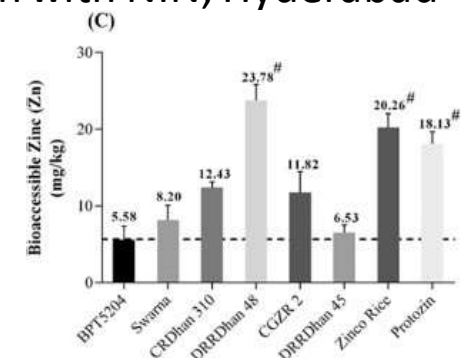
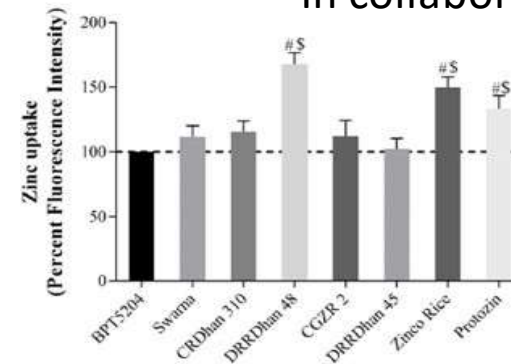
- Low glycaemic index (51.1) and a high zinc content (24 ppm) in polished grain
- Cross: Improved Samba Mahsuri\*1/ CSR27
- Inherent resistance to bacterial leaf blight (BLB) with three resistance genes (*xa5+xa13+Xa21*)
- Moderate resistance to salinity stress
- Possesses desirable grain quality parameters
  - Medium slender (MS) grains,
  - High milling recovery (69.4%),
  - Head rice recovery (HRR-60.9%)
  - Good cooking quality with intermediate amylose content (AC-24%).



## Higher Bio-accessibility and Uptake of Zinc in DRR Dhan 48 compared to other bio-fortified varieties in Caco-2 Cells (*In Vitro*)



In collaboration with NIN, Hyderabad



## DRR Dhan 48-reduces malnutrition by significantly improving the weight and height



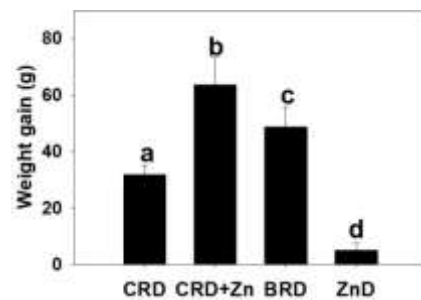
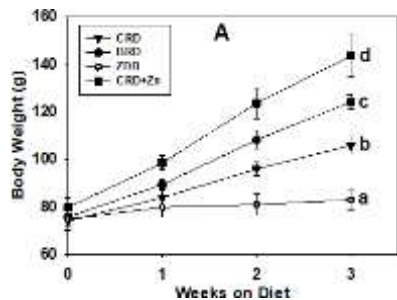
### Anthropometry indices

- Anganwadi associated with Krishi Vigyan Kendra (KVK) Madanapuram, Mahabubnagar
- Anthropometry data: Malnourished male infant (<11 months old) with hypothyroidism-fed with DRR Dhan 48 for 20 days (3 times a day - increase of body weight and height.

### Sensory evaluation

### DRR Dhan 48 Improves Growth in Zinc-Deficient Rats

4 weeks dietary zinc depletions followed by 3 week repletion with experimental diet in Wistar Kyoto Rats



CRD with Zn  
BRD  
CRD  
ZnD

CRD: Control Rice, CRD+Zn: Control Rice with added Zn; BRD; Biofortified Rice, ZnD: Zinc deficient diet

## DRR Dhan 48- Technology License Agreement



- DRR Dhan 48- commercialized under different brand names: 'Glyminoh rice'; Better grain'
- Hand pound rice with low GI (NIN), high Zn (IIRR), high protein (9.3%) & high fibre (ISARC)



- Extensive studies on Public private partnership with M/s Coramandal Fertilizers
- Premium quality rice with greater consumer acceptance and export market potential
- Wide cultivation across various parts of the country



## Consumer acceptance of High Zinc Rice DRR Dhan 48:

- The milled rice of Biofortified rice DRR Dhan 48 was distributed under CRP Biofortification project for consumer acceptance of high Zn rice on 11th - 12th January, 2024 at ICAR-IIRR, Hyderabad.

## NutriRich (High Zinc Rice Food Fair):

- As part of the CRP Biofortification project, a NutriRich (High Zinc Rice Food Fair) was conducted on 8th January, 2024 at ICAR-IIRR, Hyderabad. Participants from IIRR actively participated in creating various rice recipes using the high-zinc rice variety DRR Dhan 48.



Ref: Annual Report 2024. ICAR-Consortia Research Platform on Biofortification in selected crops for nutritional security. ICAR-Indian Institute of Rice Research, Hyderabad, India. p. 136

