

Category	: International Rice Research Conference
Select Theme	: Genetic improvement
Endorsement email	:
Keyword 1	: Biofortification
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Title of Entry	: Evaluation of rice genotypes for iron and zinc content
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Abstract	: Micronutrient deficiency especially iron and zinc is a substantial global public health and nutritional problem. One third of the world population is at risk due to low dietary intake of Fe and Zn including 2 billion people in Asia and 400 million in sub-Saharan Africa. In India and other Asian countries most of those at risk depend on C3 grains and legumes as their primary dietary source of Fe and Zn and have a high reliance on cereals, especially rice ( <i>Oryza sativa</i> L.) that has a low micronutrient concentration with poor bioavailability compared to other cereals. Therefore improvement of iron and zinc in rice is very much important to curb malnutrition. Present study was conducted at ICAR-Indian Institute of Rice Research, Hyderabad to evaluate rice genotypes for iron and zinc content in rice. A field experiment was conducted three replications consisting of 46 rice genotypes and 4 checks during kharif 2017. All 46 genotypes were obtained from International Rice Research Institute, Philippines. All yield and yield attributing characters are recorded. Sample of rice grains were collected from all plots for estimation of iron and zinc. Dehusking was done using dehusking machine for all the 150 samples. The samples were analysed using XRF machine for iron and zinc content at ICAR-IIRR, Hyderabad. Iron content varied from 6.2 ppm to 10.36 ppm where as Zinc content varied from 15.27 ppm to 23.86 ppm. Highest zinc content was observed in IR14M123 (23.86 ppm) followed by IR 95097:3-B-16-11-4-GBS (22.67ppm), IR15M1298 (22.63ppm). Similarly highest iron content was recorded in IR 95097:3-B-16-11-4-GBS (10.36 ppm) followed by IR15M1003 (9.9ppm) and IR 95040:12-B-3-10-2-GBS (9.67 ppm). Among these the entry IR 95097:3-B-16-11-4-GBS recorded highest iron and zinc content and hence very useful in providing both iron and zinc nutrients.

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