Int. J. Bioinformatics and Biological Sci.:
Vol. 8 Special Issue, 2020 (p: 163–170)

ISSN: 2319-5169

Nutritional Profiling of Selected Rice Landraces of Jeypore tract of South Odisha

Koustava Kumar Panda[1], Satpal Singh Bisht[2], Amrita Kumari Panda[3]

[1]Associate Professor, Department of Plant Biotechnology, M.S.Swaminathan School of Agriculture, Centurion University of Technology & Management, Paralakhemundi, Odisha, India
[2]Professor, Department of Zoology, Kumaon University, Nainital, Uttarakhand, India
[3]Assistant professor, Department of Biotechnology, Sant Gahira Guru University, Ambikapur, Raipur, Chhatisgarh, India

*Corresponding Email: koustava.panda@cutm.ac.in

Abstract

The present study is an attempt to characterize selected rice landraces grown in Jeypore tract of South odisha in terms of their nutritional profiles. Rice landraces are ecotypes which are cultivated in pristine habitats since time immemorial by tribal communities who serve as custodians for these races and thereby contribute immensely towards the conservation of the gene pool of these races. A total of five rice landraces were selected for the study which include: Tikichudi, Asamchudi, Baunsidubraj, Kalamalli, Kandulakathi as being known by their local names. Morphometric and biochemical characterization of grains of selected races were carried out with an objective to screen the best quality traits for nutritional profiling. Morphometric studies pertain to the determination of the length, the width, length/width ratio, coat colour, texture of grains. Biochemical characterization include the determination of their mineral profiles in addition to the determination of their total protein, sugar and vitamin contents. The ultimate objective of the study is to screen the best races in terms of their nutritional quality characteristics to include them in plant breeding and food fortification programs to curb malnutrition. Further efforts have been made to conserve the gene pool of these races through insitu and exsitu conservation approaches.

Keywords: Landraces; morphometric; biochemical; nutritional; conservation

Rice (*Oryza sativa L.*) belongs to the family of grasses, Gramineae. It is one of the major food crops of the world and forms the staple diet of about half of the world's population. Asia is the leader in rice production contributing to about 90% of the world's rice produce. Over 75% of the world rice produce is consumed by people in Asian countries which makes it an important component for the food security of Asia. Rice has been considered as the queen among cereals for its nutritional quality and higher digestibility and it has played a pivotal role in shaping the cultures, diets, and economies of billions of people. India has a long history of rice cultivation. Globally, it stands first in rice area and second in terms of rice production after China. It contributes 21.5 percent to global rice production. Within the country, rice occupies one-quarter of the total cropped area, contributing more than 40 percent of total food grain production and continues to play a vital role in the national food and livelihood security system.

How to cite this Article: Koustava Kumar Panda, Satpal Singh Bisht, Amrita Kumari Panda, 2020, Nutritional Profiling of Selected Rice Landraces of Jeypore tract of South Odisha, **8**(Special Issue) : p 163–170.
Source of Support: None; **Conflict of Interest**: None