

Category	: International Rice Research Conference
Select Theme	: Genetic improvement
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Keyword 1	: Breeding Strategy
Keyword 2	: Germplasm Enhancement
Keyword 3	: Genotype x Environment Interactions
Title of Entry	: Characterization of red rice landraces and elite cultivars of Himachal Pradesh for Nutritional, quality and Morphological traits.
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Affiliation 1	: Student
Affiliation 2	: Student
Select only one type of presentation	: 3-5 minute flash talk
Abstract	: In India rice is grown in an area of 42.5 million hectare with 108.86 million tons of production (FAOSTAT 2016). In Himachal Pradesh rice is grown in an area of 77000 ha with a production of nearly 131.6 thousand metric tonnes (Anonymous 2016). Red rice is considered as the “ancient treasure” of Himachal Pradesh. It has high medicinal concern in curing several chronic diseases due to its high nutritional value. Hence, there is a need to characterize red rice genotypes for yield, quantification of nutritional components and resistance against prevailing diseases like blast. In this context, 30 red rice landraces, elite cultivars of different ecological zones of Himachal Pradesh and derivatives of red and brown rice were evaluated. Analysis of variance indicated that mean sum of squares due to genotypes were highly significant ($p > 5\%$) for all the characters studied. High PCV, GCV, genetic advance and high heritability was observed for total anthocyanin, total phenol and total flavonoids. Moderate PCV, GCV, genetic advance and high heritability was observed for grain L: B ratio and iron content. Genotypes, ACC 19180, Bongal Dhan, Brighu Dhan, Desi Dhan, Jattoo Dhan, HPR 2946, Lal Narkanda, Matali and Naggat Dhan are superior in nutritional quality traits viz., anthocyanin, phenol, flavonoids, micro minerals like iron, zinc and manganese content, amylose and protein content. The highest protein content was observed in Kalhaina whereas highest anthocyanin in Lal Narkanda and Deval. Fe and Zn content was maximum in Acc 19164 and Kalhaina respectively. Genotypes, IC 3131180, HPR 2880, Matali, Naggat dhan, Desi dhan, HPR 2800, Jattoo dhan, Lal Narkanda, HPR 2720, Sailachaina, Chohartu with disease reaction of 0-3 scale were resistant against leaf blast. These genotypes were also characterized for morphological characters. Matali,

ACC 19180, Naggur Dhan, Bathi Dhan, Jattoo Dhan, Kalhaina and Brighu Dhan had purple awns and can be used as morphological descriptor.

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