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### SDS-PAGE analysis for seed storage proteins in drought tolerant rice genotypes

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Seed storage protein analysis represents a valid improved approach for varietal identification and genetic purity analysis. It is a useful tool for studying genetic diversity via sodium dodecylsulphate-polyacrylamide gel electrophoresis (SDS-PAGE) in a short period of time. This study was aimed at exploiting the genetic variations with respect to seed storage proteins among 24 reproductive stage drought donor rice lines along with the susceptible checks through SDS-PAGE analysis. The experiment was carried out in the rice biotechnology laboratory, Crop Improvement Division, CRRI, Cuttack during 2013 following Laemmli, 1970 procedure. The concentration of the extracted protein samples was determined using Bradford assay (1976) using different concentrations of the samples against the control. Gel photographing and documentation were carried out using Syngene gel documentation system. The present investigation revealed that the drought tolerant rice genotypes differed from each other with respect to the total number of protein bands in each of the two zones. A maximum of 12 bands were observed in germplasm line Jhona 349 and the lowest number of four bands were obtained in case Kalakeri and T136. Twelve genotypes namely, Black Gora (NCS12), Sambha Mahsuri, IR 20, Sarjoo 50, Tam Cau 9A, Koshihikari, Saita, Kalakeri, BR 21, Nan Te Hao, Dhalasaita, T 136 did not exhibit any band in this zone. The homology of genotypes (per cent similarity) for protein bands varied from 0 to 94% among different varieties. In other words, per cent of heterogeneity percentage between all possible pairs of the genotypes varied from 94% to 0%, which provided adequate genetic basis to study the variability for storage proteins among the studied genotypes. The data revealed that genotype Naveen with CR 143 2-2 showed highest homology of 94%. On the other hand genotype Basmati 370 exhibited maximum heterogeneity with Mahulata.

#### Biography

Shafina Haque has completed M.Sc. in Genetics and Plant Breeding from Calcutta University in 2010 and presently working as Senior Research fellow as well as Ph.D. scholar under the guidance of Dr. O. N. Singh and Co- guidance of Dr. S. K. Pradhan at Central Rice Research Institute, Cuttack, Orissa.

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### Assessment of crop loss due to leaf webber *Grapholita critica* Meyr. in pigeon pea

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Estimation of crop loss due to leaf webber *Grapholita critica* Meyr. (Lepidoptera: Tortricidae) on pigeon pea was conducted at U.A.S Raichur, Karnataka. The yield loss in pigeon pea (Maruthi variety) was estimated by releasing differential population of leaf webber viz., 0, 1, 2, 4, 6, 8 and 10 larvae inside the cage, with an RBD experiment. The results revealed that the yield loss due to leaf webber was 0.15, 0.71, 1.07, 2.36, 4.16 and 5.69 per cent in 1, 2, 4, 6, 8 and 10 larva released per cage respectively. The treatment seven where 10 larvae were released recorded lowest yield of 838.33 kg per ha with a highest yield loss of 5.69 per cent, compared to treatment without larvae (888.89 kg per ha).

#### Biography

N Bharath Kumar has completed his BSc at the age of 21 years from Acharya N. G. Ranga Agricultural University, Agricultural College, Bapatla, Andhra Pradesh. Through ICAR-2011 exam as a non-JRF (All India 46th rank) student, he completed his M.Sc. at the age of 24 years from University of Agricultural Sciences, Raichur, Karnataka. In M.Sc. program he secured highest O.G.P.A of 92.40 in Entomology achieving University Gold Medal. At present he is pursuing his Ph.D. from Acharya N. G. Ranga Agricultural University, Agricultural College, Bapatla, Andhra Pradesh. Mr. N. Bharath Kumar is an INSPIRE fellow awaiting inspire scholarship for his Ph.D. programme offered by Department of Science and Technology.

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