Entry No. 8RGS-0023

Category	: 8th Rice Genetics Symposium
Select Theme	: Genetics of Abiotic interactions: Stress tolerance and Mitigation
Endorsement email	:
Genetics of Abiotic interactions Stress tolerance and Mitigation Keyword 1	: anaerobic germination
Genetics of Abiotic interactions Stress tolerance and Mitigation Keyword 2	: submergence
Genetics of Abiotic interactions Stress tolerance and Mitigation Keyword 3	: flooding
Title of Entry	: Genetic variability and heritability studies for seedling vigour and anaerobic germination traits of rice cultivated under wet direct seeded conditions
Presenting author	: Chamundeswari N
Presenting author email	: narne_chamundeswari@rediffmail.com
Co author 1	: Chamundeswari N
Co author 2	: Satyanarayana PV
Co author 3	: LAL AHAMED MOHAMMED
Co author 4	: SRINIVASA RAO V
Co author 5	: Satyanarayana Rao V
Co author 6	:
Co author 7	:
Co author 8	:
Co author 9	:
Co author 10	:
Co author 11	:
Co author 12	:
Co author 13	:
Co author 14	:

Affiliation presenting author	: Acharya N G Ranga Agricultural University, Andhra Pradesh, India
Affiliation 1	: Acharya N G Ranga Agricultural University, Andhra Pradesh, India
Affiliation 2	: Acharya N G Ranga Agricultural University, Andhra Pradesh, India
Affiliation 3	: Acharya N G Ranga Agricultural University, Andhra Pradesh, India
Affiliation 4	: Acharya N G Ranga Agricultural University, Andhra Pradesh, India
Affiliation 5	: Acharya N G Ranga Agricultural University, Andhra Pradesh, India
Affiliation 6	:
Affiliation 7	:
Affiliation 8	:
Affiliation 9	:
Affiliation 10	:
Affiliation 11	:
Affiliation 12	:
Affiliation 13	:
Affiliation 14	:
Select only one type of presentation	: Poster
Abstract	: Transplantation of rice seedlings is the most common practice in intensive rice cultivation. Alternatively, various pattern of direct seeding methods are also used depending on the agro ecological conditions. Information on nature and magnitude of variability for different seedling vigour and anaerobic germination traits present in a population due to genetic and non-genetic causes is an important prerequisite for systematic breeding programs to improve yield potential of the crop. Hence, in rabi 2016-17 present study was conducted at RARS, Maruteru for seedling vigour and anaerobic germination traits. The analysis of variance indicated significant differences among fifty treatments for all the 34 characters studied. The results of genetic parameters revealed that moderate to high GCV, PCV coupled with high heritability and high genetic advance as percen of mean for plant height at maturity (cm), days to 50% flowering, number of panicles/plant, numbe of grains/panicle, grain yield/plant (g), test weight, kernel L/B ratio, culm diameter, bending strength, leaf area index, Harvest index, germination % on 10th day, SSL on 10th day (cm), SSL on 14th day (cm), SRL on 10th day (cm), SRL on 14th day (cm), SFW on 14th day (mg), SDW (mg), SV I -1, SV I -2, AG % after 2 weeks of submergence, plant survival % after 2 weeks, AG % after 3 weeks of submergence, plant survival % after 3 weeks suggesting the predominance of additive type of gene action in controlling these traits. Hence, good response to selection can be attained in early generations for improving these traits. The remaining characters under study showed low to moderate estimates for GCV, PCV, moderate to high heritability estimates and low to high genetic

advance as percent of mean indicating the role of both additive and non-additive gene effects in the expression of these traits. Hence, instead of simple selection, other methods like heterosis breeding or recurrent selection could be better. Genotypes exhibited significant mean performance are: anaerobic germination (AC39397, AC39416A, MTU1140) shoot length (N22, Azucena), root length (AC39397, AC39416A), dry weight (MTU 1140, AC 39416A, AC 39397), seedling vigour index (AC39416A, Azucena)

Read Less»

Uploaded Files »

No files found.