

Category	: International Rice Research Conference
Select Theme	: Genetic improvement
Endorsement email	:
Keyword 1	: Breeding Strategy
Keyword 2	: Breeding for specific management (water, labor, nutrients, etc)
Keyword 3	: Genetic gain
Title of Entry	: DEVELOPMENT OF PHOTO SENSITIVE HIGH YIELDING RICE VARIETIES- A NEW STRATEGY OF BREEDING FOR CLIMATE SMART VARIETIES IN TELANGANA STATE OF INDIA
Presenting author	: Chennamadhavuni Damodar Raju
Presenting author email	: cdraju2008@gmail.com
Co author 1	:
Co author 2	:
Affiliation presenting author	:
Affiliation 1	:
Affiliation 2	:
Select only one type of presentation	: 15 minute oral presentation
Abstract	: The rice varieties and germplasm can be classified as photo-sensitive and photo insensitive based on their sensitivity towards the day length variations during growth period. During kharif season a photo sensitive variety flowers during the third week of october, in rabi season the flowering comes in third week of march irrespective of sowing dates based on the degree of photo sensitivity like low, medium and high in Telangana state of India. Rice breeders focused on replacing low yielding varieties with high yielding varieties which are photo insensitive to produce high grain yield. However, most of the native land races with superior nutritional quality and resistance sources in rice are photo sensitive, leaving rice breeders to avoid that germplasm in breeding programmes. After the spectacular success of the high-yielding programme, emphasis in rice breeding gradually shifted to other innovative aspects like climate smart varieties. These traits are controlled by major and minor quantitative traits implying that the genetic mechanisms underlying these traits are complex. Plant height, duration, sowing time and many more traits profoundly affect the yield of rice. These properties also show varietal variation and are, therefore, amenable to breeding. Incorporation of these characteristics will greatly enhance the adoptability, location specificity and hence the ultimate productivity of the rice. Rice varieties JGL 3844, JGL 3855, JGL 11470 and RNR 15048 were developed, with an objective to replace BPT 5204 and in Telangana State using the parents with photo sensitivity as a result these varieties also got the character of photo sensitivity in different degrees like low, medium and high. The photosensitivity character was considered to be the undesirable, as the duration and plant height varies in these varieties. But due to recent changes in climate and

monsoon behavior there is need for climate smart rice varieties which can adjust to different climatic situations with changed duration and plant height based on sowing time. These varieties can be sown in different dates according to climatic conditions and a single variety can be used as short, medium and long duration variety by adjusting the date of sowing.

[Read Less»](#)

Uploaded Files »

No files found.