Dr. G. PADMAVATHI
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1. Personal bio-data:

a) Position/Designation : **Principal Scientist**

b) Joining date in ICAR : **04.08.1991, (D.O.B. 10/03/1963)**

c) Discipline and Specialization : **Plant breeding**

d) Training/advance exposure in the area of work:

- Applications of Marker Assisted Selection for Crop Improvement, 20-24, August 2007, (5 days)Barwale Foundation, Hyderabad'2007.
- "Marker Assisted Selection (MAS): Theory, Practice and Application",21st January to 1st February, 2008,(12 days)
- International Rice Research Institute, Los Banos, Laguna, Philippines, 2008.
- Sixth Centre for Excellence in Genomics (CEG) training Course on "Application of genomics technologies in plant breeding", 16-27, November, 2009 (11 days)'ICRISAT, Hyderabad, 2009.
- "Data Analysis using Statistical Analysis System (SAS)", 15- 21, September, 2010 (7 days), NAARM, Hyderabad, 2010.

e) Contribution to the scientific advancement :

- Developed three promising salinity/alkalinity tolerant elite lines namely IET Nos. 21935, 21936 and 21937
- Identified seven saline tolerant restorer lines, four saline tolerant maintainer lines and 12 saline tolerant hybrids at ECe of 12dSm^{-1}
- Identified genes in donors for resistance to Blast (Pi-k gene in Carreon, Dular, Tetep), Green leafhopper (Glh 6 gene in IET 12175), Brown planthopper (Bph 3 and Bph 6 in Velluthacheera, T1471, T1426 and T 1432); and Whitebacked planthopper (wbph 4 in ARC 5984, Wbph 3 and another unknown gene in Velluthacheera and wbph 4 and one dominant gene in MO1)

- Identified quantitative trait loci conferring resistance to brown planthopper in the donors ARC 10550 and Sinnasivappu against biotype 4; green leafhopper resistance in Ptb 8 against Indian biotype (Ib) and alkalinity tolerance in CSR 27.
- Associated in the development of a genetic stock (IET 9691) for Phosphorous use efficiency under deficit soils.
- Associated in the morphological, quality and molecular characterization of 288 aromatic short grain germplasm accessions.

2. Future Planning of research :

- Breeding high yielding rice varieties with resistance to planthoppers.
- Identification of molecular markers linked with resistance to planthoppers in rice.
- Conventional and molecular breeding of salt tolerant rice varieties.
- Genetic enhancement of aromatic short grain rices.
- Nutritional profiling and generation of rice varieties for increased iron and zinc content.

3. Publications:

- **G. Padmavathi**, N V Krishnaiah, G.S.V. Prasad and Y. Kondala Rao. 2007. Identification of resistance genes for green leafhopper, Nephotettix virescens (Distant) in pre-release rice varieties. 2007. The Indian Journal of Genetics and Plant Breeding. 67(2): 118-120.
- **G. Padmavathi,** T. Ram, Y. Kondala Rao, I.C. Pasalu and B.C. Viraktamath. 2007. Genetics of whitebacked planthopper, Sogatella furcifera (Horvath) resistance in rice. SABRAO Journal of Plant Breeding and Genetics. 39(2): 99-105
- **G. Padmavathi,** T. Ram, Y. Kondala Rao, I.C. Pasalu and B.C. Viraktamath. 2007. Genetics of whitebacked planthopper, Sogatella furcifera (Horvath) resistance in rice. SABRAO Journal of Plant Breeding and Genetics. 39(2): 99-105
- Krishnamurthy P, B. Sree Devi, T. Ram, **G. Padmavathi**, R. Mahendra Kumar, P. Raghuveer Rao, N. Shobha Rani, P. C. Latha and S.P.Singh. 2010. Evaluation of rice genotypes for phosphorous use efficiency under soil mineral stress conditions. Oryza. 47(1): 29-33
- G. Janaki Ramayya, **G. Padmavathi**, R. K.Gautam, Ramdeen, K. Ramesh and S A Mastan. 2009. Alkalinity tolerance in rice (Oryza sativa l.) using molecular markers. Advanced biotechnology. 9(1):24-27.

4. Other relevant activities of Scientist :

- Coordinating All India Coordinated Rice Improvement Program trials on varietial improvement related to soil stress and hills
- Resource person for rice varieties in training programs, farmers and durting seed day and farmers' day organized at DRR.
- Trained and guided 2 M.Sc students as well as currently guiding 2 Ph.D students.

- External reviewer for Ph D and M Sc theses of agricultural universities
- Member of Stress Tolerant Varieties For Poor Farmers of Asia and South Africa (STRASA) network
- Member for institutional committies viz., publication committee, registration committee, aesthetic committee and canteen management committee.