

Dr. C. N. NEERAJA

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1. Personal bio-data:

- a) **Position/Designation** : **Principal Scientist**
b) **Joining date in ICAR** : **20.2.1995, (DOB: 27/08/1968)**
c) **Discipline and Specialization** : **Plant Biotechnology (Molecular Breeding)**
d) **Training/advance exposure in the area of work:**

- DBT CREST Fellowship to University of Aberdeen - Nitrogen Use Efficiency in Rice: Meta analysis and Association Mapping

e) Contribution to the scientific advancement:

- Identification of genotypes for NUE and genes associated with NUE
- Identification two candidate genes viz., sucrose phosphate synthase and sucrose transporter for grain filling in rice
- Fine mapping of Rf4 and Rf3 loci for fertility restoration of WA-CMS in rice
- Identification of candidate gene for rice tungro virus resistance QTL
- Identification of three genomic regions associated with zinc uptake in rice grains

2. Future Planning of research :

- Identification of genotypes and genomic regions for Nitrogen use efficiency
- Development of varieties with high zinc content in the grains
- Identification of candidate genes for grain filling in rice
- Development of rice tungro virus resistant varieties

3. Publications:

- Sirknath B, Subhakar Rao I, Surekha K, Voleti S R and Neeraja C N*. 2015. Enhanced expression of OsSPL14 gene and its association with yield components in rice (*Oryza sativa*) under low nitrogen conditions. Gene doi:10.1016/j.gene.2015.10.062
- Vijayalakshmi Pujarula, Vishnukiran Turaga, Ramana kumari Basava, Srikanth Bollam, Subhakar Rao Isetty, Swamy KN, Subbarao LV, Raghuvier Rao Pusukuru, Subrahmanyam Desiraju, Neeraja CN, Voleti Sitapati Rao. Biochemical and

physiological characterization for nitrogen use efficiency in aromatic rice genotypes. *Field Crops Research* 179 (2015) 132–143

- Rawat N, CN Neeraja, S Nair and JS Bentur 2012 Differential gene expression in gall midge susceptible rice genotypes revealed by suppressive subtraction hybridization (SSH) cDNA libraries and microarray analysis. *Rice (Springer)* 5:8 DOI:10.1186/1939-8433-5-8
- Subhakara Rao I, BSrikanth, VHKishore, PBalaji Suresh, UChaitanya, LR Vemireddy, SRVoleti, LVS Rao, NSRani, RM Sundaram, MS Madhav, SMBalachandran, GSV Prasad, BC Viraktamath and CN Neeraja* 2011. Indel polymorphism in sugar translocation and transport genes associated with grain filling of rice (*Oryza sativa* L.). *Molecular Breeding (Springer)* 28:683–691
- Rawat N, CN Neeraja, RM Sundaram, S Nair and JS Bentur 2012. A novel mechanism of gall midge resistance in the rice variety Kavya revealed by microarray analysis. *Functional and Integrative Genomics (Springer)* 12:249–264
- Balaji Suresh P, B Srikanth, VH Kishore, IS Rao, LR Vemireddy, N Dharika, RMSundaram, MSRamesha, KRS Sambasivarao, BC Viraktamath and CN Neeraja*.2012. Fine mapping of Rf3 and Rf4 fertility restorer loci of WA-CMS of rice (*Oryza sativa* L.) and validation of the developed marker system for identification of restorer lines. *Euphytica (Springer)* 187:421–435
- Singh N, TTM Dang, GV Vergara, DMPandey, D Sanchez, CN Neeraja, EM Septiningsih, M Mendioro, EM Tecson-Mendoza, IM Abdelbagi, DJ Mackill and S Heuer. 2010. Molecular marker survey and expression analyses of the rice submergence-tolerance gene SUB1A. *Theoretical Applied Genetics (Springer)* 121: 1441-1453

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4. Other relevant activities of Scientist:

Acting as Treasurer for the Society for Advancement of Rice Research, DRR