**Dr. SUBRAHMANYAM DESIRAJU**
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## 1. Personal bio-data:

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

**b) Joining date in ICAR** : **September, 1998, (DOB: 11/11/1960)**

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

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

- Received one month extensive training in Plant Molecular Biology in International Centre for Genetic Engineering and Biotechnology (ICGEB) in 1989. The training programme includes hands-on experience in the field of chloroplast molecular biology

- Received Training on "Bionergitics of Photosynthesis: Studies on functional aspects of energy tranducing photosynthetic apparatus & related bioenergitic process" at School of Life Sciences, Jawaharlal Nehru University, New Delhi during 1990.

- Attended a practical training course on "Integrated Data Information System (IDIS). The course content includes training on Linux OS and Postgres RDBMS. Organized by Indo-Gangetic Basin Coordinating Unit of Challenge Programme on Water and Food (CPWF) at ICAR Research Complex for eastern Region, Patna from 20th September, 2003 to 10$^{th}$ October, 2003.

- Participated in a practical training course on Participatory GIS methods under NRSP-DFID,UK funded research project (R7830/7839). The course was organized by Foundation for Ecological Research, Advocacy and Learning (FERAL) from 13 to 24th November, 2003.

- Attended training programme on **"Data Analysis using Statistical Analysis System (SAS)"** under Strengthening Statistical Computing for NARS (SSCNARS) programme of NAIP (National Agricultural Innovation Project) and organized at National Academy of Agricultural Research Management (NAARM), Hyderabad.

**e) Contribution to the scientific advancement :**

- Quantified the relative contribution of carbon by individual leaves and other photosynthesizing organs to grain filling of Brassica juncea and Sunflower
- Evaluated use of chlorophyll fluorescence technique for noninvasive screening of crop germplasm for drought, salinity and high temperature stresses.
- Identified the physiological basis for growth inhibition by ethylene based on $^{14}C$ fractionation studied in Indian mustard
- Studied the effect of changing temperature regimes on grain filling and oil quality in sunflower and Indian mustard.
- Studied physiological basis of differential response of rice varieties to low temperature and developed economical irrigation schedules for boro rice cultivation.
- Studied physiology and biochemistry of heavy metals and aluminum toxicity in crop plants. Identified the relationship between photosynthetic traits with grain yield and biomass production in Mustard, Finger millet, Barnyard Millet, Sunflower, buckwheat and Soybean

**2. Future Planning of research:**

- Identification of high temperature tolerant rice genotypes and elucidating the physiological and biochemical basis of differential response of genotypes.
- Studies on carbon remobilization during grain filling in rice and identifying genotypic variation in stem reserve remobilization.
- Identification of genotypic variation in leaf photosynthetic characteristics in rice.

**3. Publications :**


- **Subrahmanyam, D.** and Rathore, V.S. 1992.Influence of ethylene on $^{14}CO_2$ assimilation and partitioning in Indian mustard. Plant Physiology and Biochemistry. 31(1): 81-86.
- **Subrahmanyam, D**. and Rathore, V.S. 1995. High temperature influence $^{14}CO_2$ assimilation and allocation of $^{14}C$ into different biochemical fractions in the leaves of Indian Mustard. Journal of Agronomy and Crop Science 174: 319-323.
- **Subrahmanyam, D.** and Rathore, V.S. 2004. $^{14}CO_2$ assimilation and $^{14}C$-photosynthate translocation in different leaves of sunflower. Photosynthetica 42(2): 313-316.
- **Subrahmanyam, D**., Subash, N., Haris, A.A. 2006. Influence of water stress on leaf photosynthetic characteristics in wheat cultivars differing in their susceptibility to drought. Photosynthetica 44(1):125-129.
- **Subrahmanyam, D**. 2008. Effects of chromium toxicity on leaf photosynthetic characteristics and oxidative changes in wheat (Triticum aestivum). Photosynthetica 46(3):339-346.

## 4. Other relevant activities of Scientist:

- Acting as Guide/Co-guide to Post-graduate students of ANGRAU
- Involved in 3 institute projects as co-PI
- Implementing one Institute project as PI
- Acting as member, Purchase Advisory Committee of DRR.
- Actively contributing in design, implementation and analysis of AICRIP Plant Physiology trials.