

Profile of Dr. C.K. Gupta

1 Name of the Scientist : **DR. CHANDAN KUMAR GUPTA**



2 Personal Biodata

- a) Position/Designation** : Scientist (Senior Scale), Plant Physiology
- b) Contact Details**
- i. ICAR email** : chandan.gupta@icar.gov.in
- ii. Personal email** : chandan.hau@gmail.com
- iii. Mobile no.** : +91-9454013132
- c) Joining date in**
- i. ICAR** : 20th April, 2010
- ii. IISR** : 16th July, 2018
- d) Discipline and specialization** : Plant Physiology (Heavy metal phytoremediation, oxidative stress, seed biology, root physiology and use of plant growth regulators in field crops)
- e) Training/advance exposure in the area of work:**

Training programme	Title	Duration	Venue	Organised by
Summer School	Phenotyping for drought adaptable physiological traits in different crops	21 days	AICRP on Sunflower & Department of Crop Physiology, GKVK, UAS, Bengaluru, India	ICAR
Training	Quantitative Decision Making Techniques for Agricultural Management and Research for Scientific personnel	15 days	IIFM, Bhopal, India	IGFRI, Jhansi
Winter School	Instrumental Techniques in Agriculture and Food Quality Assessment	21 days	Department of Biotechnology, JAU, Junagadh, India	ICAR
Training	Non-destructive Phenotyping and Phenomics for Dissection of Abiotic Stress Tolerance, Gene Discovery and Crop Improvement	10 days	Department of Plant Physiology, IARI, New Delhi, India	IARI/ICAR
Workshop	Project Development workshop	3 days	NAARM, Hyderabad, India	National Agriculture Science Fund, ICAR
Training	90th FOCARS	4 months	NAARM, Hyderabad, India	ICAR
Training	National training on Seed Quality Assurance	5 days	Kerala Agricultural University, Thrissur	NSRTC, Varanasi, India

f) Contribution to the scientific advancement:

- Developed innovative technologies for in vitro maturation of seeds of *Panicum maximum* and enhanced ovule-to-seed ratio in *P. maximum* by external application of phytohormones.

- Identified physiological maturity stage in berseem and *Pennisetum pedicellatum* for seed production. Physiological, biochemical and molecular analysis of differentially aged seeds of berseem, oat and cowpea
- Developed understanding on phytosiderophore mediated phytoremediation of heavy metals by graminaceous crops.
- Identified root architectural traits in *P. maximum* associated with high biomass.

3 Current area of research : Sugarcane physiology and biochemistry

4 Publications :

- **Gupta CK** and Singh B (2017) Uninhibited biosynthesis and release of phytosiderophores in the presence of heavy metal (HM) favors HM remediation. *Environ Sci Pollut Res* DOI 10.1007/s11356-017-8636-y. (NAAS rating: **8.76**)
- D.Vijay, **C.K. Gupta** and D.R. (2017) Innovative technologies for quality seed production and vegetative multiplication in forage grasses. *Curr. Sci.* 114 (1). 148-154 (NAAS rating: **6.97**)
- Manjunatha N, M. Prajapati, Vijay D., A. Maity, V. K. Wasnik, **C. K.Gupta** and S. S. Parmar, 2018, Effect of Cupric oxide and Zinc oxide nanoparticles on seed mycoflora and seed quality of fodder crops. *J. Environ. Biol.* (accepted) in Vol. 39. (NAAS rating: **6.70**)
- Maity A., N. Natarajan, M. Pastor, D. Vijay, **C. K. Gupta** and V. K. Wasnik (2018) Nanoparticles influence seed germination traits and seed pathogen infection rate in sorghum (*Sorghum bicolor*) and cowpea (*Vigna unguiculata*). *J. Environ. Biol.* 56: 363-372. (NAAS rating: **6.70**)
- Vinod Kumar Wasnik, A. Maity, D. Vijay, S. R. Kantwa, **C.K. Gupta** and Vikas Kumar. 2016. Efficacy of different herbicides on weed flora of berseem (*Trifolium alexandrinum* L.) Range Management and Agro forestry. 38 (2): 221-226 (NAAS rating: **6.39**)
- Verma R, Vijay D, **Gupta CK** and Malaviya DR 2014. Seed quality enhancement of oat (*Avena sativa* L.) varieties through priming. Range Management and Agroforestry 35(1) (NAAS rating: **6.39**)
- Maity A., D. Vijay, S. K. Sing and **C. K. Gupta**. 2017 Layered pelleting of seed with nutrient enriched soil enhances seed germination in dinanath grass (*Pennisetum pedicellatum*). Range Management and Agro forestry. 38. 70-75 (NAAS rating: **6.39**)
- Malaviya DR, Vijay D, **Gupta CK**, Roy AK and Kaushal P 2013. Quality seed production of range grasses - A major constraint in revitalizing tropical pastures. *Tropical Grasslands-Forrajes Tropicales* 1:97–98. (NAAS rating: **6.0**)

5 Awards and Fellowship :

Award name	Year	Awarding agency
Young Scientist	2016	Society for Scientific Development in Agriculture & Technology (SSDAT), India
Interdisciplinary Team Award	2016	SSDAT, India
Best Paper	2017	Range Management Society of India (RMSI), India
SRF	2010	CSIR, India
JRF	2008	CSIR, India
NET-Life Sciences	2008	UGC-CSIR, India
NET-Plant Physiology	2008	ASRB, India
JRF	2005	ICAR, India
National Talent Scholarship	2001	ICAR, India

6 Other relevant activities of Scientist : Life member of Indian Society of Plant Physiology, Range Management Society of India and Reviewer of many reputed scientific societies