ICAR –INDIAN INSTITUTE of SUGARCANE RESEARCH
LUCKNOW 226002, UTTAR PRADESH

Personal Information

Dr. Rajeev Kumar, Scientist (Senior Scale), Plant Biochemistry, Division of Plant Physiology & Biochemistry	
Designation	*Scientist (Senior Scale)*
Division/Section	*Plant Physiology & Biochemistry*
Research Area	*Stress Physiology and Biochemistry, Stress molecular biology, Post-harvest Biology*

Details of Projects under implementation (Institute Project)

- *PI:* **"**Evaluation of Silica in relation to moisture stress and productivity of sugarcane" (2019-24)
- *Co-PI: "*Assessment of scope for invigoration of biomass dynamics during sugarcane growth cycle through plant growth regulators" *(2018-2023).*
- *Co-PI: "*Understanding mechanisms of sugar accumulation and WUE in sugarcane through physio-biochemical studies" *(2018-2023)*
- *Co-PI:"* Process development for enhancing ethanol recovery from sugarcane trash and "B-heavy" molasses *(2018-2023).*
- *Co-PI: "*Nano-assisted urea coating for improving nitrogen use efficiency in sugarcane crop" *(2021-2026).*
- *Co-PI: "*Diversity profiling and management strategies of bacteria associated with post-harvest sucrose biodeterioration in sugarcane" (2021-26)

Publications

Scientific/ technical leaf folder

1. Pushpa Singh, Anam and **Rajeev Kumar**. (2022). PGR Technology for Enhancing Sugarcane Yield. ICAR-Indian Institute of Sugarcane Research, Lucknow.*Singh S, Raj C, Goswami SK, Roy S, Rathod NKK, Prakash B. (2022).Yellow leaf disease of sugarcane and management. ICAR-IISR, Lucknow*

Research Papers:

2. *Gujjar RS, Joshi D, Srivastava S, **Kumar R**, Singh S, Shiv A, Goswami SK, Singh A, Rathode KK, Upadhyay A., Pathak AD, Viswanathan R. (2023) Unraveling Colletotrichumfalcatum proteome for pathogenicity related genes during red rot disease in sugarcane. Applied microbiology and biotechnology. Status: Under Review.*
3. *Gujjar RS, Joshi D, Srivastava S, **Kumar R**, Singh S, Shiv A, Goswami SK, Pathak AD, Viswanathan R. (2023) Draft proteome of Colletotrichumfalcatum revealed differential abundance of fungal pathogenicity-related proteins during red rot disease in sugarcane. Plant cell reports doi:https://doi.org/10.21203/rs.3.rs-2558383/v1.*
4. *Singh H, Dolui S, **Kumar R**, Pal S, Bhattacharya A. (2022) Butachlor Tolerance in Wheat Seedlings. International Journal of Economic Plant 9 (3):214-221.*
5. *Kumari N, Datta J, **Kumar R,** Chakravarty A, Pal S. (2020).Effect of quizalofop and fenoxaprop on nutrient and antinutrient contents during seed development of mung bean (Vignaradiata L.). Journal of Pharmacognosy and Phytochemistry. **9**(2): 664-669.*
6. *Kumari N, Datta J, **Kumar R,** Chakravarty A, Pal S. (2020). Herbicide induced changes in nutrient and antinutrient content during mung bean (VignaradiataL.) seed development. International Journal of Chemical Studies. **8** (2) : 223-228*
7. *Kumari VV, Banerjee P, NathR, SenguptaK, SarathChandran MA,**Kumar R**. (2019). Effect of foliar spray on phenology and yield of Lentil sown on different dates. Journal of Crop and Weed, **15**(3): 54-58 (2019)*
8. ***Kumar R**, Singh P, Rai RK, Kumari M, Kumar A, Pathak AD, Olekar NS. (2018). Homa organic farming reduces pest and disease infestations in okra and improves its quality and yield.Journal of Entomology and Zoology Studies6 (6): 211 – 218.*
9. *Jain Radha, Singh Anshu, Singh CP, **Kumar R**, Singh SP, Chandra A., Srivastava VK and Pathak AD. (2018). Rooting Pattern and Anatomical Alteration in Roots of Sugarcane Genotypes under Waterlogged Conditions. Climate Change and Environmental Sustainability **6** (2): 139-153.*
10. ***Kumar R**, Kumar A, Chakraborty S, Basarkar PW. (2017). Effect of Homa organic farming on growth, yield and quality, parameters of Okra. Journal of Applied and Natural Science 9 (4): 2205 - 2210 (2017)*

Popular articles

11. Rama Kant Rai, Pushpa Singh , NidhiTripathi, S.P. Singh and **Rajeev Kumar** (2017). Physio-biochemical approaches for improving physiological efficiency of sugarcane in sub-tropical India, ***Indian Sugar*** 68(7), 32-43

12. Pushpa Singh, Rama Kant Rai, NidhiTripathi, S.P. Singh and **Rajeev Kumar** (2017) Sugarcane rhizospheric engineering for sustaining ratoon productivity ***Indian Sugar*** 68(7), 23-31.

13. **Rajeev Kumar** Anshu Singh, Amaresh Chandra, CP Singh, and Radha Jain. (2017). Gluten mukt ganne ka atta. Ikshu Rajbhasha Patrika Volume 2: 6th edition Page 91*Roy S. Goswami SK et al., (2021). Seventy years of crop protection research achievements at IISR****10(2):*** *43-61*

14. **Rajeev Kumar**, Pushpa Singh, RK Rai, AD Pathak, PW Basarkar, SN Singh. Homa kheti: ek rasayan mukt kheti . Kisan Jyoti Rajbhasha Patrika 6th edition volume **2:** 96-98 (2017).
15. RK Rai, Pushpa Singh, AD Pathak, **Rajeev Kumar**, SP Singh and SN Singh. Vridhi Niyantrak ke Prayog se Ganna Utpadan me Badhotari. Kisan Jyoti Rajbhasha Patrika 6th edition volume **2:** 27-30 (2017) Published in 2018.
16. **Rajeev Kumar** Anshu Singh, Amaresh Chandra, CP Singh, Radha Jain. Ganne ki kheti me Jeevamrut: ek *Jaivik* Vikalp. Ikshu Rajbhasha Patrika Volume 1: 7th edition Page 26 (2018)
17. Rama Kant Rai, Pushpa Singh and **Rajeev Kumar** (2019) Ganne mei padap vridhi hormones ke fayde, ***Kheti***, Feb, vol 10, pp 3-5.
18. **Rajeev Kumar,** Pushpa Singh, Radha Jain, A. Chandra, CK Gupta, RR Verma, RK singh. Vartman jalvaayu parivartan paridrishya me ganne me silica ki bhoomika. Ikshu Rajbhasha Patrika Volume 2: 8th edition Page 67 (2019).
19. Ram Singh, Ravi Kant Pandey, Manju, **Rajeev Kumar,** RS Chaurasia, Anam, Pushpa Singh. Jadon ke aaspaas ke mool parivesh mrida me pedi ganna ki utpadakta ki mahata. Rajbhasha Patrika Volume 2: 8th edition Page 61 (2019).

20. **Rajeev Kumar**, Pushpa Singh and Abhishek Kumar Dubey. (2020). Ganne Se Jaiv ethanol ka utpadan ek vaikalpik urja strot. Akshaya Kheti Hindi Patrika (ICAR-RCER, Patna).Volume 1: 74-75

Books or Chapter Published

1. Basak N, Verma VC, **Kumar R**, Kumar G. (2021). Mechanism of ZFN-Mediated Genome Editing: Scope and opportunities in Genome Editing in Plants principles and Applications page 13-28. CRC Press Taylor & Francis.
2. VermaVC, AcharyaS, **Kumar R**, VermaBC, SinghA, Tiwari VK. (2022). Rhizobium as soil healthengineer in Rhizospheric Engineering page 77-90. Academic Press Elsevier.
3. **KumarR,** Verma VC, Mall, AK, Pathak AD. (2022). Bioethanol Production from Sugar Beet Juices and Molasses for Economic and Environmental Perspectives in Sugar Beet Cultivation, Management and Processing vol.II 905-930 Springer Nature.

Awards

1. "2nd best oral paper presentation award" in 7th IAPSIT International Sugar Conference – SUGARCON-2022 by *Society for Sugar Research and Promotion, New Delhi, India*
2. "2nd best oral paper presentation award" in 6th IAPSIT International Sugar Conference – SUGARCON- 2019 by *Society for Sugar Research and Promotion, New Delhi, India*
3. Awarded third in poster presentation in 7th IAPSIT International Sugar Conference – SUGARCON-2022 by *Society for Sugar Research and Promotion, New Delhi, India*
4. **Outstanding performance**, as a team in the module **"Field Experience Training (FET)"** 105th Foundation Course for Agricultural Research Service (FOCARS), 05 January-04 April, 2017 by ICAR- *National Academy of Agricultural Research Management, Hyderabad, India*