

✚ **Name : Dr. Sudhir Kumar**

✚ Designation: Scientist

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✚ **Google Scholar Profile:**

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✚ **Career**

B.Sc (Agriculture) from Allahabad Agricultural Institute Deemed University, Allahabad

M.Sc. (Genetics and Plant Breeding) from G. B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand

Ph.D (Genetics and Plant Breeding) from G. B. Pant University of Agriculture and Technology, Pantnagar, Uttarakhand

Position and employment

S. No.	Institution Place	Position	From (Date)	To (date)
1	ICAR-Indian Institute of Agricultural Biotechnology Ranchi	Scientist	01/07/2017	Till date
2	ICAR Research Complex for NEH Region (Manipur centre)	Scientist	23/04/2010	30/06/2017
3	NAARM Hyderabad	Scientist	15/12/2009	22/04/2010

✚ **Awards and Honours**

➤ Awarded ICAR-Junior Research Fellowship (JRF) for Master Degree programme.

➤ *Qualified ICAR Senior Research Fellowship (SRF)*

➤ *Qualified CSIR-UGC-NET with Junior Research Fellowship*

➤ *Qualified GATE examination, 2008 (95 percentile)*

➤ *Qualified ARS NET examination, 2009*

- *Received Young Achiever Award, 2016 by Society for Advancement of Human and Nature (SADHNA) Dr. Y.S Parmar University of Horticulture and forestry*
- *Received Young Scientist Award at 2nd International Conference on Food and Agriculture 2018 held at Dhanbad, Jharkhand*
- *Received Young Scientist Award at 2nd National Conference on Doubling of Farmer Income for Sustainable and Harmonious Agriculture held at ICAR-IINRG Ranchi during 11 to 12th August, 2018, conferred by DISHA-2018*

Research Area

Molecular breeding and genomic in pulse and rice crop

Group members

Publications

Publication. (Research and Review articles)

1. Bangale, U, Baliya, V., Kumar, P.S., Devi, S. J. S. , Bhadana, V.P., Senguttuvel, P., Kumar,, S, Sharma S.K., Sharma, PK., Prasad, M.S., Madhav, M.S. (2017) . Diverse rice landraces of north-east India enables the identification of novel genetic resources for Magnaporthe resistance. Frontier in plant science 8: 01-13 (NAAS Rating: 10.11)
2. Singh, B.K., Choudhary, S.B., Yadav, S., Malhotra, E.V., Rani, R. , Ambawat, S., Priyamedha, Pandey, A., Kumar, IR., Kumar, S., Sharma, H.K., Singh, DK. and Rai, P.K. (2018). Genetic structure identification and assessment of interrelationships between Brassica and allied genera using newly developed genic-SSRs of Indian Mustard (*Brassica juncea* L.). Industrial Crops and Products, 1 13: 1 1 1-120. (NAAS Rating: 10.19)
3. Singh, B.K., Singh, S.P., Shekhawat, K., Rathore, S.S., Pandey, A., Kumar, S., Singh, DK., Choudhry, S.B., Kumar, S. and Singh D. 2019. Comparative analysis for understanding salinity tolerance mechanism in Indian Mustard (*Brassica juncea* L.) Acta Physiologiae Plantarum 41: 104. (NAAS Rating: 7.61)
4. Mahadeva Swamy, H.K., Anila, M., Kale, R.R., Bhadana, V.P., Anantha, M.S., Brajendra, P., Harija, S.K., Balachiranjeevi, CH., Laxmi Prasanna, B., Pranathi, K., Dilip, T., Bhaskar, S., Kumar, v.A., Kousik, M.B.V.N., Harika, G., Swapnil, K., Rekha, G., Cheralu, C., Gouri Shankar, V. , Reddy, N.S., Kumar, S., Balachandran, M.S., Madhav, M.S., Kumar, R.M. and Sundaram, R.M. (2019). Phenotypic and molecular characterization of rice germplasm lines and identification of novel source for low soil phosphorus tolerance in rice. Euphytica, 215 (07): 01-18. (NAAS Rating: 7.53)
5. Kumar, S., Pandey, I.D., Rather, S.A. and Rewasia, Fl.(2019). Genetic variability and inter traits association for cooking and micro-nutrient trait in advance lines of Kalanamak. The Journal of Animal and Plant Sciences, 29(2): 467-475 (NAAS Rating: 6.53)
6. Ansari, M.A., Pandey, A., Kumar, S., Kumar, A., Sangeeta, M., Meitei, Ch. B., Sharma, S.K., Roy, S.S., Das, A., Mishra, D, Singh, I.M., and Prakash N. (2019).

- Evaluation of genetic variation in *Perilla* for agro-morphological and quality traits. *Indian Journal of Agricultural Sciences*, 89(6): 940-945. (NAAS Rating: 6.25)
7. Singh, L, Fiyaz, R.A., Kumar, S., Ansari, M.A. and Gupta, S. (2013). Genetic variability, Correlation and path analysis for yield and its attributing traits in pigeonpea (*Cajanus cajan*) grown under rainfed conditions of Manipur. *Indian Journal of Agricultural Science*, 83(8): 852-858. (NAAS Rating: 6.25)
 8. Bhadana, V.P., Ansari, M.A., Punitha, P., Prakash, N., Singh, I.M., Sharma, P.K., Kumar, S., Dutta, S., Lal, B. and Ngachan, S. V. (2015). Participatory research for assessing the suitability of potential innovations: A case study on high-yielding varieties options for rice farmers in North East India. *Indian Journal of Agricultural Sciences* 85(7):902-907(NAAS Rating: 6.25)
 9. Harsha, Deo, I. , Kumar, S. and Tallah, Md. (2017). Assessment of genetic variability and intercharacter association studies in rice genotypes (*Oryza sativa* L.). *International Journal of Current Microbiology and Applied Sciences* 6(9): 2041-2046. (NAAS Rating: 5.33)
 10. Kumar, R., Kumawat, N., Kumar, S., Singh, A.K. and Bohra, J.S. (2017). Effect of NPKS and Zn fertilization on, growth, yield and quality of baby corn-A review. *International Journal of Current Microbiology and Applied Sciences*, 6(3): 1392-1428. (NAAS Rating: 5.33)
 11. Bhuvanewari S., Kumar S., Singh, I.M. and Prakash N. (2015). Evaluation of advanced breeding lines of rice for grain yield stability. *International journal of Agricultural and statistics science*, 11(1): 07-10. (NAAS Rating: 5.13)
 12. Kumar, S. and Deo, I. (2016). Studies on genetic variability, heritability and genetic advance in advance lines of Kalanamak aromatic rice (*Oryza sativa* L.) *Ecology, Environment and Conservation*, 22(22):891-895. (NAAS Rating: 4.89)
 13. Rather, S.A., Deo, I., Khan, A.H. Kumar, K., Kumar, S., Singh, N. and Panda, G.S. (2016). Standard seed box screening for brown plant hopper resistance and agro-morphological evaluation of advanced breeding lines of rice (*Oryza sativa* L.) *Ecology, Environment and Conservation* 22(Sp): S-17-S-21. (NAAS Rating: 4.89)
 14. Gahtyari, N.C., Patel, P.I., Choudhary, R. , Kumar, S., Kumar, N. and Jaiswal, J.P. (2017). Combining ability studies for yield, associated traits and quality attributes in rice for south Gujrat (*Oryza sativa* L.), *Journal of natural and applied sciences*, 1): 60-67. (NAAS Rating: 4.84)
 15. Tripathi, A., Kumar, S., Singh, M.K., Kumar, A. and Karanwal, M.K. (2017). Phenotypic assessment of rice (*Oryza sativa* L.) genotypes for genetic variability under direct seeded conditions. *Journal of natural and applied sciences*, 9(1): 06-09. (NAAS Rating: 4.84)
 16. Baishya, L.K., Anasari, M.A., Sarkar, D, Ghosh, M., Kumar, S. and Prakash, N. (2016). Productivity enhancement in shifting cultivated land through biofertilizer and micro-dosing of NPK in eastern Himalayan region. *Research on Crops*, 17(2): 268-275. (NAAS Rating: 4.75)
 17. Kumar, S., Devi, E.L., Sharma, S.K., Ansari, M.A., Phurailatpam, S., Chanu Ng, T., Singh, Th. S., Prakash, N., Kumawat, N., Mandal, D. and Kumar, A. (2017). Rice

- breeding strategies of North Eastern India for resilience to biotic and abiotic stresses: A review. *Oryza* 54(1): 112. (NAAS Rating: 4.44)
18. Kumar, R. , Kumawat, N., Kumar, S., Kumar, R., Kumar, M., Sah, R.P., Kumar, U. and Kumar, A. (2016). Direct seeded rice: research strategies and opportunities for water and weed management. *Oryza.*, 53(4): 354-365. (NAAS Rating: 4.44)
 19. Kumar, S., Bhuvanewari, S., Devi, EL., Sharma, S.K., Ansari, M.A., Singh, I.M., Singh, Y.R. and Prakash, N. (2017). Estimation of genetic variability, correlation and path analysis in short duration Rice Genotypes of Manipur. *Journal of Agri Search* 4(2): 1 12-1 18 (NAAS Rating: 4.41)
 20. Bhuvanewari, S., Singh, I. M., Kumar, S., Singh, S., Leeda Mosang, Ts., Sharma, S.K., Singh, G. and Prakash N. (20 18). On-Farm Multilocation Adaptability Trial of Promising Rice Genotypes across Manipur. *Indian Journal of Hill Farming.* 31(1): 165-167. (NAAS Rating:4.39)
 21. Kumar, S., Singh, D.P. and Singh, N.K. (2015) Genetic diversity through microsatellite analysis & estimation of protein, iron and zinc in F5 progenies of a wide cross of mungbean x blackgram. *Green Farming*, 6(3): 487-491. (NAAS Rating: 4.38)
 22. Kumar, S. , Singh, D.P. and Singh, N.K. (2015). Assessment of genetic parameters and correlation analysis in F5 progenies of an interspecific cross of mungbean x blackgram. *Environment and Ecology.*, 33(4): 1425-1429. (NAAS Rating: 4.11)
 23. Rather S., Pandey, I.D., Panda, G.S. and Kumar S. (2017). Relative efficiency of different emasculation methods in rice (*Oryza sativa* L.). *Environment & Ecology* 35 (3B): 2205-2208.(NAAS Rating: 4.11)
 24. Kumar, A., Kumar, S., Kapoor, C., Bhagwati, R. , Pandey, A. and Pattanayak, A. (2014). GGE biplot analysis of genotype x environment interaction in soybean grown in NEH region of India. *Environment & Ecology*, 32(3A): 1047-1050. (NAAS Rating: 4.11)
 25. Agalwe, S.B., Bangle, U, Rama Devi, S.J.S., Balija., V, Bhadana, V.P., Kumar, S., Prasad, M.S. and Madhav, M.S. (2018). Characterization of Akhanphou, an unique landrace from north east India and its RILs population for rice leaf and neck blast resistance. *Current Trends in Biotechnology and Pharmacy*, 12(2): 1 18-127 (NAAS Rating: 3.90)
 26. Kumar, S. and Kumar, R. (2014). Genetic improvement in mungbean (*Vigna radiata*) (L.) Wilzeck) for yield, nutrition and resistance to stresses. *International Journal of Tropical Agriculture*, 32(4): 683-687. (NAAS Rating: 3.49)
 27. Kumar S, Kumar A, Pandey A, Pattanayak A, Singh J, Singh IM, Prakash N and Bhagawati R, Ngachan S. (2017). Genotype x environment interaction, adaptability and yield stability of rice genotypes of north east India. *Vegetos* 30(Spl-I): 52-57. (NAAS Rating: Not mentioned for 2020).

28. Agalwe, S.B., Bangle, U., Rama Devi, S.J.S., Balija, V., Bhadana, V.P., Sharma, S.K., Sharma, P.K., Kumar, S., Maddamshetty, S.P., and Madhav, M.S. (2017). Identification of novel QTLs conferring field resistance for rice leaf and neck blast from an unique land race of India. (2017). *Gene Report*, 7: 35-42. (NAAS Rating: Not allotted)
29. Devi, EL., Devi, Ch .P., Kumar, S. , Sharma, S.K., Beemrotea, A., Chongtham, S.K., Singh,. Ch P, Tania, Ch., Singh, T.B., Ningombama, A., Akoijama,. R, Singh, I.M., Singh, Y.R., Monteshori, S., Omitta, Y., Prakash, N. and Ngachan, S. V. (2017) Marker assisted selection (MAS) towards generating stress tolerant crop plants. *Plant Gene I I* : 205—218. (NAAS Rating: Not allotted).
30. Kumar, S., Rao, M. and Gupta, N.C. (2014). Enrichment of iron and folate in rice through biotechnology. *Research and review: Journal of food science and technology*, 3(3): 28-30. (NAAS Rating: NA)
31. Kumar, S., Rao, M. and Gupta, N.C. (2014). Breeding for iron and zinc content in cultivated wheat. *Research and review: Journal of crop science and technology*, 3(3): 7-9. (NAAS Rating: NA)
32. Kumar, S. and Rao M. (2014). Conventional and molecular breeding for leaf blight and blast resistance in rice . *Research and review: Journal of ecology*, 3(3): 1-3. (NAAS Rating: NA)
33. Kumar, S. and Rao, M. (2014). Conventional and molecular breeding for abiotic stresses tolerance in rice. *Research and review: Journal of ecology*, 3(3): 1-4. (NAAS Rating: NA)
34. Kumar, S. and Rao, M. (2014). Conventional and molecular approaches for development of quality protein maize. *Research and review: Journal of Pharmacognosy*, 1(3): 12-14. (NAAS Rating: NA)
35. Kumar, S. Rao, M. and Gupta, N.C. (2014). Breeding strategies of self-pollinated crop with special emphasis on hybrid rice: Present and future perspectives. *Research and review: Journal of agricultural science and technology*, 3(3): 1-3. (NAAS Rating: NA)
36. Kumar, M., Uniyal, M. , Kumar, N., Kumar, S. Gangwar, R. (2014). Conventional and molecular breeding for development of drought tolerant maize cultivars. *Research and review. Journal of crop science and technology*. 4(1): 1-6.

Book Chapter:

1. Devi, EL., Kumar, S., Singh, T.B., Sharma. S.K., Beemrotea, A., Devi, Ch. P., Chongtham, S.K., Singh, Ch. H., Yumlembam, R.A., Haribhusan, A. , Prakash, N. and Wani, S.H. (2017). Adaptation strategies and defense mechanisms of plants during environmental stress. In: *Medicinal Plants and Environmental Challenges*. Ghorbanpour and A. Varma (eds.) Springer International Publishing AG, <https://doi.org/10.1007/978-3-319-68717-9> 20 pp 359-413.

2. Kumar, S., Gahtyari, N.C., Kumar, M., Kumar, N. (2018). Enhancement of iron and zinc content in rice and wheat: A sustainable strategy to combat malnutrition. In: Agriculture against the climate odds. Singh V, Melkania U, Kushwaha GS, Negi V (eds.). SSDN Publisher and Distributors, pp 87.
3. Kumawat, N., Kumar, R., Kumar, S. and Meena, V.S. (2017). Nutrient solubilizing microbes (NSMs): Its role in sustainable crop production. In: Agriculturally Important Microbes for Sustainable Agriculture. Meena VS, Mishra PT, Bisht JK, Pattanayak A (eds.). Springer Nature DOI 10.1007/978-981-10-5343-6 2, pp: 25-61.
4. Lal, S.K., Kumar, S., Sheri, V., Mehta, S., Varakumar, P., Ram, B., Borphukan, B., James, D, Fartyal, D. and Reddy, M.K. (2018). Seed priming: An emerging technology to impart abiotic stress tolerance in crop plants. In: Advances in Seed Priming. Rakshit A and Singh HB (eds.). Springer Nature DOI 10.1007/978-981-13-0032-5.
5. Kumar, S., Devi, EL., Sharma, S.K., Ansari, M.A., Roy, S.S., Ningombam, A., Chanu Ng, T., Phurailatpam, S., and Prakash, N. (2018). Recent advancement in tree improvement for sustainability and high productivity. In: Protection of forest for sustainable development in Manipur. Simte, G., Infimate, Ia., Hauzel, V., Chothe, L.S.(eds). Balaji Publication, pp. 14-28
6. Ningombam, A., Basudha, Ch., Sailo, B., Roy, S.S., Singh, T.B., Akoijam, R., Beemrote, A., Devi, Ch. P., Tania, Ch., Kumar, S., Sharma, s.K., Devi, EL., Singh, Kh. R. and Prakash, N. (2018). Conserving biodiversity for preserving ecosystem and a sustainable livelihood. In: Protection of forest for sustainable development in Manipur. Simte, G., Infimate, L., Hauzel, V., Chothe, L.S.(eds). Balaji Publication, pp. 29-42
7. Devi, EL., Kumar, S., Devi, Ch. P., Singh, T.B., Ningombam, A., Sharma, S.K., Tannia, Ch., Akoijam, R., Beemrote, A., Singh, Kh. R., Singh, I.M. and Prakash, N. (2018). Conventional to new plant breeding mehods: A transformation towards precisions and efficient crop improvement. In: Protection of forest for sustainable development in Manipur. Simte, G., Infimate, L, Hauzel, V., Chothe, L.S.(eds). Balaji Publication, pp 06-13
8. Prakash, N., Ningombam, A. , Singh, K.R., Singh, T.B., Singh, I.M., Bashudha, C., Sahoo, M.R., Roy, S.S., Kumar, S. et al.. ((2017. Research contribution of ICAR Research Complex Manipur Centre. In: Das A et al. (eds.) 4 Deacdes ofAgricultural Research in NEH Region 1975-2017. ICAR RC for NEH Region, Umiam, Meghalaya. pp 198-220.
9. Prakash, N, Ansari, M.A., Roy, S.S., sahuo, M.R., Baishya, LK., Kumar, S., sailo, B., Sharma, S.K., et al. (2014) Climate resilient agriculture : Issues, constraints and strategies. In:

Technological options for climate resilient hill agriculture Edition: Ist Publisher: ICAR
Research Complex for NEH Region, Umiam, Meghalaya- 793 103 Editors: Ngachan
S V, Singh R K, Saikia U S, Sethy B K and D J Rajkhowa.

Book Authored

1. Sujatha, T.P., Kumar, S., Pandey, A., Kumar, A. , Kumar, A. and Mishra, G.P. (2018).
Model short and easy type question & answers in biotechnology. Waser Books
Publications. ISBN: 978-3-96492-077-5. P: 01-1 19.
2. Agrawal, S., Yadav, R.D.S., Verma, O.P., Sharma, S., Kumar, S., Pandey, A. , Gautam,
S.C.and Mishra, G.P. (2018). Numerical examples in breeding and biotechnology.
Waser Books Publications. ISBN: 978-3-96492-074-4. P: 01-11

 **Patent (if any)**