



CURRICULUM VITAE

- 1. Name: Dr. Sananda Mondal**
- 2. Designation: Associate Professor of Crop Physiology**
- 3. Date of Birth: 24th Nov, 1985**
- 4. Date of Joining: 26th Nov, 2012**
- 5. Communication Address:** Department of Crop Physiology,
Institute of Agriculture, Visva-Bharati,
Sriniketan-731236, West Bengal
E-mail : mondalsananda@gmail.com

6. Academic Qualification

Degree	Board/University	Subjects	Year Passing	of Div.	Marks (%)
Ph.D.	Banaras Hindu University, Varanasi (U.P.)	Plant Physiology	2014	1 st	85.3
Post- Graduation [M. Sc. (Ag.)]	Banaras Hindu University, Varanasi (U.P.)	Plant Physiology	2009	1 st	89.1
Graduation [B. Sc. (Ag.)]	VisvaBharati	Agriculture	2007	1 st	77.6
Intermediate [10+2]	WBCHSE	Ben, Eng, Math Chem, Phys, Bios	2003	1 st	69.5
Matriculation [10 th]	WBBSE	Ben, Eng, Chem, PhySci, Life Sci, His, Geo, Bios	2001	1 st	78.37

7. Teaching/ Research Experience:

- (i) Duration/ Period:** 9 years approximately as Assistant Professor
- (ii) Title of the thesis:** (a) M.Sc. (Ag): **Seed hardening vis-à-vis seedling growth of rice and plantlet regeneration through somatic embryogenesis.**
(b) Ph.D.: **Use of primed seeds for screening salinity stress tolerance through tissue culture technique in rice (*Oryza sativa* L.).**
- (iii) Area of Research:** (a) **Tissue Culture (Somatic embryogenesis in rice)**
(b) **Seed Priming**
(c) **Stress Metabolism**
(d) **Plant Growth Regulation**

ACADEMIC ACHEIVEMENTS:

- *Qualified ICAR NET examination in Discipline of Basic Plant Sciences in 2010.*
- *Qualified CSIR-UGC NET examination in Discipline of Life Sciences in 2010.*
- *Qualified ICAR-SRF (PGS) examination in Discipline of Plant Physiology in 2010.*

SCHOLARSHIP/ FELLOWSHIP/ AWARDS:

- UGC Research Fellowship during Ph.D. programme till Dec. 2010.
- DST INSPIRE Fellowship (JRF & SRF Qualified) during Ph.D programme since 1st Jan. 2011 to 24th Nov, 2012.
- Awarded BHU MEDEL for standing first in Plant Physiology at the M. Sc. (Ag) programme (Department of Plant Physiology, I.Ag.Sc., BHU), 2009.
- Merit award by Jawaharlal Nehru Memorial Fund Award as secured 1nd rank in the class during M. Sc. (Ag) programme (Department of Plant Physiology, I.Ag.Sc., BHU), 2010.
- Second best poster presentation award on National Symposium “*Advances in Biotechnological Research in Agri-Horticultural Crops for Sustaining Productivity, Quality Improvement and Food Security*”, September 14-16, 2011, SVBPUAT, Meerut, U.P.
- Best poster presentation award in “*International Conference on Mycology and Plant Pathology: Biotechnological Approache*”s, February 27-29, 2012, BHU, Varanasi, U.P.
- Second best paper award in the second International Conference on Bio-resource and stress management for the paper entitled “Standardization of culture medium for somatic embryogenesis of rice Var. MTU 7029” held at ANGRAU, Hyderabad, during 7 - 10 January, 2015.
- First best paper Award in the second International Conference on Media and Communication in sustainable development for the paper entitled “Seaweed extracts as source of bio-fertilizers and biostimulants- As avenue for sustainable agriculture” organized by Asian Congress for Media & Communication India Chapter’s held at Visva-Bharati, Santiniketan on February 11-13, 2019.

EXTRA CURRICULAR ACTIVITIES:

- Working with **Helpage India** for 15 days in the purpose of social work, 2008.
- Participated in Inter-School Dr. Radhakrishnan Rolling Shield Debate competition and secured **third position, 1999.**
- Completed 5th year Prativa Sr. Diploma Degree on ‘**Ideas of Art and Craft Forum**’ and secured 1st position, 2000.
- Participated Training programme on “**Microarray Technology to unzip up and down regulation gene/s governing seed related attributes**” held on 5-7 Aug. 2010, DSR Mau, UP.
- Participated as volunteer in **SAARC Workshop** on Biodiversity Conservation held on 21-22 Sept. 2010, at BHU, Varanasi.

- Participated as volunteer in **ICON BHU** held on 21-23 Jan. 2011, at BHU, Varanasi.
- Participated Training Program on **Data Analysis Using SPSS**, held from May 23rd -29th, 2011, BHU Varanasi.
- Taking 100 days training on **Food Processing and Preservation Techniques**, from BHU, 2012.
- Participated Workshop on **Technical Communication for Research Scholars**, held on 5th -11th May, 2012, at BHU, Varanasi.

COMPUTER SKILL:

Advanced Certificate in Web Application (BRAINWARE), of six months certificate course with working experience of MS DOS, MS Office, Internet, E-mail, Programming Logic and Techniques (PLT), Hyper Text Modeling Language (HTML) etc.

Research Papers

1. **Mondal, S., P, Vijai and Bose, B.** (2011). Role of seed hardening in rice variety Swarna (MTU 7029). *Research Journal of Seed Science*. **4(3)**: 157-165. <https://scialert.net/abstract/?doi=rjss.2011.157.165>
2. **Mondal, S., Singh, R.P., Sen, C. and Bose, B.** (2011). Study of physiological potentiality of callus and plant regeneration through somatic embryogenesis in rice variety Swarna. *American Journal of Plant Physiology*. **6(2)**: 91-98. <https://scialert.net/abstract/?doi=ajpp.2011.91.98>
3. Ahirwar, MK., **Mondal, S., Singh, MK, Sen, C and Singh RP.** (2012). A high frequency plantlets regeneration protocol for banana (*Musa paradisiaca* L.) micropropagation. *Asian Journal of Horticultural Sciences*, **7(2)**:397-401. <https://www.semanticscholar.org/paper/A-high-frequency-plantlets-regeneration-protocol-Ahirwar-Mondal/5499f088c91df1338dfaf41232a304f7d64b3172>
4. **Mondal, S and Bose, B.** (2012). Kinetics study of α -amylase extracted from germinating wheat (var. Malviya 234) endosperm of primed and non-primed seeds. *Indian Journal of Agricultural Biochemistry*, **25(2)**:137-141.
5. **Mondal, S., Ahirwar, MK., Singh, MK and Singh, RP.** (2012). Effect of coconut water and ascorbic acid on shoot regeneration in banana variety Dwarf Cavendish. *The Asian Journal of Horticulture*, **7(2)**: 416-419. <http://www.hindagrihorticulturalsocie...>
6. **Mondal, S and Bose, B.** (2013). Improvement in regeneration potentiality by using magnesium nitrate hardened seeds of rice *in vitro*. *Vegetos*, **26 (2)**: 98-104. <https://www.researchgate.net/publication/263390098>
7. **Mondal, S., Singh, R.P., and Bose, B.** (2013). Standardization of culture medium for somatic embryogenesis of rice var. MTU 7029. *International Journal of Bio-Resource and Stress Management*, **4(4)**: 500-505.

https://www.pphouse.org/upload_article/6_398_IJBSM_Dec_2013_Mondal_et_al.pdf

8. Bose, B. and **Mondal, S.** (2013). Climate Change and Sustainable Agriculture in context to Seed Priming and Role of Nitrate. *Vegetos*, 26 (Special): 192-204.

[https://vegetosindia.org/journal/vegetos-26\(special\)2013/Climate-Change-and-Sustainable-Agriculture-in-Context-to-Seed-Priming-and-Role-of-Nitrate.html](https://vegetosindia.org/journal/vegetos-26(special)2013/Climate-Change-and-Sustainable-Agriculture-in-Context-to-Seed-Priming-and-Role-of-Nitrate.html)

9. Panda D, Panda S, Pramanik K and **Mondal S.** (2014). Karonda (*Carissa spp.*): An underutilized minor fruit crop with therapeutic and medicinal use. *International Journal of Economic Plants*, 1(1): 009-014.

10. **Mondal, S.**, Singh, R.P., and Bose, B. (2014). *In vitro* improvement in regeneration potentiality by using kinetin primed seeds of rice (var. MTU-7029). *Vegetos*, 27(2): 20-28. <https://www.scitechnol.com/abstract/in-vitro-improvement-in-regeneration-potentiality-by-using-kinetin-primed-seeds-of-rice-var-mtu7029-3891.html>

11. **Mondal, S.**, Panda D., Anyatullah and Bose, B (2014). Experimental strategies presenting a holistic view regarding heat stress in plants. *International Journal of Bio-Resource and Stress Management*, 5(3):444-460.

https://www.pphouse.org/upload_article/23_IJBSM_Sep_14_Mondal_et_al.pdf

12. Panda, D., Sen, A., Dhakre, D. S. and **Mondal, S.** (2015). Correlation Analysis of Some Growth, Physiological Parameters, Yield and Yield Attributes of Chick pea (*Cicer arietinum* L.). *International Journal of Bio-resource, Environment and Agricultural Sciences*. 1(3): 90-95. http://sbear.in/V1_3_-04.pdf

13. Panda, D., Mishra, S., Swain, K. C., Chakraborty, N.R. and **Mondal, S.** (2016). Bio-Energy Crops in Mitigation of Climate Change. *International Journal of Bio-resource, Environment and Agricultural Sciences*. 2(1):242-250. [http://sbear.in/V2\(1\)-06.pdf](http://sbear.in/V2(1)-06.pdf)

14. Kumar, M., Pant, B., **Mondal, S.** and Bose, B. (2016). Hydro and halo priming: influenced germination responses in wheat Var-HUW-468 under heavy metal stress. *Acta Physiologica Plant*. 38: 1-7.

https://www.researchgate.net/publication/306095728_Hydro_and_halo_priming_influenced_germination_responses_in_wheat_Var-HUW-468_under_heavy_metal_stress

15. Kumar, S., Hemantaranjan, A., **Mondal, S.** and Bose, B. (2016). Impact of KNO₃ Primed Seeds on the Performance of Late Sown Sesame (*Sesamum indicum* L.). *International Journal of Bio-resource and Stress Management*. 7(4):950-954.

16. **Mondal, S.**, Singh, R.P., and Bose, B. (2016). Effect of hydro and hormonal priming on seedling vigour during initial vegetative growth of rice (*Oryza sativa* L.). *International Journal of Agriculture, Environment and Biotechnology*. 9(6):1125-1130. <http://ndpublisher.in/admin/issues/ijaebv9n6z.pdf>

17. **Mondal, S.** and Bose, B. (2018). Accelerated aging affects the germination physiology of wheat seeds. *International Journal of Agriculture, Environment and Biotechnology*. 11(1): 01-08. <http://ndpublisher.in/admin/issues/IJAEBv11n1z2.pdf>

18. **Mondal, S.**, Kumar, M. and Bose, B. (2018). Impact of halo and hormonal priming on early vegetative growth phase of rice var. MTU 7029. *International*

Journal of Bio-resource and Stress Management. 9(1):078-082.
https://www.pphouse.org/upload_article/34886010_14_IJBSM_February_2018_Mondal_et_al.pdf

19. **Mondal, S.**, Kumar, M. and Bose, B. (2018). Effect of hydropriming and osmopriming with magnesium nitrate in the early vegetative growth phase of rice variety Swarna. *Journal of Pharmacognosy and Phytochemistry.* 7(5): 1343-1346.
<https://www.phytojournal.com/archives/2018/vol7issue5/PartW/7-4-704-107.pdf>

20. **Mondal, S.** and Panda, D. (2019). Studies on the Response of Potato to Boronated Sulphur. *Plant Archives.* 19(2): 2622–2626, ISSN 2581-6063.
[http://plantarchives.org/19-2/2622-2626%20\(5362\).pdf](http://plantarchives.org/19-2/2622-2626%20(5362).pdf)

21. **Mondal, S.** and Bose, B (2019). Impact of micronutrient seed priming on germination, growth, development, nutritional status and yield aspects of plants. *Journal of Plant Nutrition.* 42: 2577-2599. DOI: 10.1080/01904167.2019.1655032.
<https://www.tandfonline.com/doi/full/10.1080/01904167.2019.1655032>

22. Panda, D. and **Mondal, S.** (2020). Effect of boronated sulphur on the growth and yield of Cauliflower. *Ecology, Environment & Conservation.* 26 (February Suppl. Issue): S101–S107, ISSN 0971-765X

http://www.envirobiotechjournals.com/article_abstract.php?aid=10232&iid=296&jid=3

23. Panda, D. and **Mondal, S.** (2020). Seed Enhancement for Sustainable Agriculture: An Overview of Recent Trends. *Plant Archives.* 20 (Supplement 1): 2320-2332, ISSN 2581-6063.
[http://www.plantarchives.org/SPECIAL%20ISSUE%202020-1/2320%20-2332%20\(407\).pdf](http://www.plantarchives.org/SPECIAL%20ISSUE%202020-1/2320%20-2332%20(407).pdf)

24. Panda D., Padhiary, A. K. and **Mondal, S.** (2020). Effect of Panchagavya and Jeevamrit on growth and yield of tomato (*Solanum lycopersicum* L.). *Annals of Plant and Soil Research.* 22 (1) :80-85, ISSN 2347-6036.
<http://www.gkvsociety.com/control/uploads/92907115.pdf>

25. **Mondal, S.**, Duary, B., Mondal, B. and Panda, D. (2020). Allelopathic effect of aqueous leaf extracts of selected trees on germination and seedling growth of rice. *Journal of Environmental Biology.* 41 (2): 255-260, ISSN 0254-8704.
http://www.jeb.co.in/index.php?page=abstract&issue=202003_mar20&number=16

26. Ghosh A, **Mondal S.** and Panda D. (2020). Morpho-physiological responses of chilli (*Capsicum annuum* L.) to foliar application of micronutrients and growth regulators. *International Journal of Bio-resource and Stress Management.* 11 (1) :095-102, ISSN 0976-4038. DOI: <http://doi.org/10.23910/IJBSM/2020.11.1.2070a>

27. Ghosh A, **Mondal S.** and Panda D. (2020). Effect of micronutrients and growth regulators on pigment content, nitrate reductase activity and relative leaf water content of Chilli (*Capsicum annuum* L). *Plant Cell Biotechnology and Molecular Biology.* 21 (13&14): 37-51, ISSN 0972-2025.
<https://ikprress.org/index.php/PCBMB/article/view/5083>

28. **Mondal, S.**, Pramanik, K., Panda, D., Dutta, D., Karmakar, S. and Bose, B. (2022). Sulfur in Seeds: An Overview. *Plants.* 11, 450.
<https://doi.org/10.3390/plants11030450>

29. Biswas, C., Pramanik K., Saren, B.K., **Mondal, S.** and De, S.K. (2022). Performance of Indian Mustard cv. Kesari cold under different sowing method and

nutrient management. Chemical Engineering. v03i01:01-09.
<http://dx.doi.org/10.53709/CHE.2022.v03i01.001>

30. Singal R.K., Kumar M., Bose B., **Mondal S.**, Srivastava S., Dhankher O.M., and Tripathi R.D. (2022). Heavy metal (loid)s phytotoxicity in crops and its mitigation through seed priming technology. *International Journal of Phytoremediation*. <https://doi.org/10.1080/1522651.2022.2068502>

31. **Mondal S.**, Bose B. (2022). Effect of potassium nitrate on germination physiology of magnesium nitrate primed and non-primed rice seeds var. Swarna. *Ecology, Environment and Conservation*. 28(3): 1507-1515.

32. **Mondal S.** (2022). Heavy metal stress-induced activation of Mitogen- Activated Protein Kinases signalling cascade in plants. *Plant Molecular Biology Reporter*. <https://doi.org/10.1007/s11105-022-01350-w>

33. **Mondal S.**, Karmakar S, Panda D, Pramanik K, Bose B and Singhal R.K. (2023). Crucial plant processes under heat stress and tolerance through heat shock proteins. *Plant Stress*. 10(2023):100227. <https://doi.org/10.1016/j.stress.2023.100227>

34. Padhiary A.K., Panda D, Nayak B.R., **Mondal S.**, Srichandan S. (2023). Performance of rice varieties with varying irrigation scheduling under aerobic condition. *International Journal of Environment and Climate Change*. 13(10):816-821.

35. Panda D, **Mondal S.** (2023). Effect of growth regulators on growth and quality of strawberry cv. Sweet Sensation in pot culture. *International Journal of Bio-Resource and Stress Management*. 14(8):1154-1167.

36. Ghosh, A., Panda, D., **Mondal, S.** (2023). Correlation Analysis of Some Morpho-Physiological Parameters, Yield and Quality attributes of Chilli (*Capsicum annum* L.). *Biological Forum – An International Journal*. 15(1): 732-736.

37. **Mondal S.**, Mondal S and Pramanik K. (2024). Effect of nutrimpriming with boric acid, zinc sulphate heptahydrate and its combination on germination physiology of lentil (*Lens culinaris* L.) cv. HUL 57. *Agricultural Science Digest*. 44(4): 611-617. <http://doi.org/10.18805/ag.D-5584>.

38. **Mondal, S.**, and Bose, B. (2024). Effect of salt stress on plant regeneration efficiency in primed and non-primed seed's calli of rice (*Oryza sativa* L.). *Biologia Futura*. <https://doi.org/10.1007/s42977-024-00237-z>.

39. Gopalakrishnan, V.A.K., Mondal, S., Vaghela, P., Panda, D., and Ghosh, A., (2024). Combined analysis over the years on the influence of foliar application of kappaphycus seaweed-based biostimulant on the yield of two different varieties of black gram (*Vigna mungo* (L.) Hepper)". *Asian Journal of Soil Science and Plant Nutrition*. 10(4): 238-45. <https://doi.org/10.9734/ajsspn/2024/v10i4399>.

40. Gopalakrishnan, V.A.K., Mondal S., Bagariya M., Trivedi K., Panda D., Ghosh A. (2025). Varied responses of TAU-1 and DBGV-5 varieties of black gram to *Kappaphycus alvarezii*-based biostimulant under uniform agro-climatic conditions. *Journal of Applied Phycology*. <http://doi.org/10.1007/s10811-024-03418-4>.

Book Chapter

1. **Mondal, S.** and Bose, B. (2011). Salinity stress response in plants: Physico-chemical and biotechnological approaches. *Advances in Plant Physiology*. Vol. 13. 314-348. ISBN: 9788172337988.

2. Bose, B., **Mondal, S.**, Sinha, A. and Trivedi, P. (2011). Seed priming in respect to disease resistance. *Modern Trends in Microbial Biodiversity of Natural Ecosystem*. Daya Publishing House, New Delhi, pp.493-512. ISBN: 9788176222594.
3. **Mondal, S.** and Bose, B. (2014). An impact of seed priming on disease resistance- a review. *Microbial Diversity and biotechnology in Food security*. In: *Microbial Diversity and Biotechnology in Food Security* (eds) Kharwar RN, Upadhyay R, Dubey N, Raghuwanshi R (Eds.), Springer, Vol 1. pp: 193-204. ISBN No: 978-81-322-1800-5.
4. Anaytullah, **Mondal, S.**, Srivastava, A.K. and Bose, B. (2013). Influence of heat stress on plant responses: an approach to physiological, chemical, biotechnological and molecular aspects. *Advances in Plant Physiology*. Scientific Publisher, Vol. 14. pp:512-544. ISBN: 978-81-7233-868-8.
5. **Mondal, S.** and Bose, B. (2013). Transcription factors and their strategic roles in developing plants. *Microbial biodiversity: A boon for agriculture sustainability*, Eds. Asha Sinha, Seweta Srivastava, Ravindra Kumar, Biotech Books: Replika Press Pvt. Ltd. Vol. 1. pp: 476-491. ISBN: 978-81-7622-341-6
6. Singh, P.K., **Mondal, S.** and Bose, B. (2013). Cross-talk signaling and survival strategies in plants under changing environment. *Advances in Plant Physiology*. Scientific Publisher, Vol. 14. pp:296-313. ISBN: 978-81-7233-868-8.
7. Pant, B., **Mondal, S.** and Bose, B. (2015). Morpho-physiological and molecular basis of drought response in plants. In: *Advances in Plant Physiology* (eds.) A. Hemantaranjan, Scientific Publishers (India), Jodhpur, vol.16. pp. 90-106. ISBN:9788172339647
8. Mukherjee, S., Pramanik, K., **Mondal, S.**, Maske, N.M., Mandi, A., Duary, S., Mahato, K., Mondal, B., Panda, D. and Saren, B. (2016). Economics and yield of summer rice (*Oryza sativa* L.) as influenced by age of seedlings, nutrient and water management under SRI in lateritic belt of West Bengal. In: *Family Farming-Challenges and Opportunities* (eds.) B. Mondal, D, Sarkar, S. D. Mukhopadhyay, S. Ghosh, B.C. Roy and S. Chowdhury, Renu Publishers, New Delhi, p.111-124. ISBN: 978-93-85502-22-4
9. Panda, D., Pramanik, K., and **Mondal, S.** (2016). Effect of Growth Regulators on some Physiological Parameters of Sesame under Moisture Stress. In: *Family Farming-Challenges and Opportunities* (eds.) B. Mondal, D, Sarkar, S. D. Mukhopadhyay, S. Ghosh, B.C. Roy and S. Chowdhury, Renu Publishers, New Delhi, p.135-141. ISBN: 978-93-85502-22-4
10. **Mondal, S.**, Panda, D., Pramanik, K. and Bose, B. (2016). Seed Priming: A Plant Physiological Technology Boon for Crop Improvement in Agriculture In: *Family Farming-Challenges and Opportunities* (eds.) B. Mondal, D, Sarkar, S. D. Mukhopadhyay, S. Ghosh, B.C. Roy and S. Chowdhury, Renu Publishers, New Delhi, p.188-197. ISBN: 978-93-85502-22-4
11. Panda D, Mondal B, Mukherjee A, **Mondal S** (2016). Brahmi (*Bacopa monnieri*)- An important medicinal plant with immense therapeutic uses. In: *Trailing the footprints of nutrition and wellness: entrapping foothold of healthy nation* (eds.) S. Chowdhury, D.

Sarkar, B. Mondal, A. Mukherjee, K. Chatterjee. Anand Prakashan, Kolkatta-700007, Pp. 319-326. ISBN: 978-81-88904-88-4.

12. Panda, D., **Mondal, S.**, Mondal, B. and Pramanik, K. (2017). Food and Nutritional security through biofortification of staple food crops. In: Relevance of B.R. Ambedkar for inclusive development, agriculture and sustainable rural development (Vol-II) (Eds.) B. Mondal, B. Das, A. Lokho, G. Mondal, G.C. Malik and S. Ghosh. New Delhi Publishers New Delhi-110059, p.254-264 (ISBN 978-93-85503-58-0).

13. Bose, B., Pant, B., Singhal, R.K., Kumar, M. and **Mondal, S.** (2018). Phytochrome: physiology, molecular aspects and sustainable crop production. In: Emerging Trends of Plant Physiology for Sustainable Crop Production. (Eds.) Zafar Abbas, Ajay Kumar Tiwari and Pradeep Kumar. Apple Academic Press. Pp. 25-48 (CRC Press, Taylor & Francis Group). ISBN 9781771886369

14. Mondal, S., Panda, D., Pramanik, K., Bhattacharya, S. and Bose, B. (2018). Potential of Nutripriming: A Review. In: Human Rights and Social Justice: Agricultural Issues and Concern (Eds.) B. Mondal, A. Lokho and G. Mondal. New Delhi Publishers, New Delhi, p.7-20 (ISBN 978-93-86453-48-8)

15. Panda, D., **Mondal, S.** and Pramanik K. (2018). Fonio Millet (*Digitaria exilis*) and Quinoa (*Chenopodium quinoa*) as Superfoods of the World: A Panacea for Hunger and Malnutrition. In: Human Rights and Social Justice: Agricultural Issues and Concern (Eds.) B. Mondal, A. Lokho and G. Mondal. New Delhi Publishers, New Delhi, p.71-80 (ISBN 978-93-86453-48-8)

16. Panda, D., **Mondal, S.** and Mondal, B. (2018). Plant Quarantine Regulations in India: Past, Present and Future. In: Human Rights and Social Justice: Agricultural Issues and Concern (Eds.) B. Mondal, A. Lokho and G. Mondal. New Delhi Publishers, New Delhi, p.93-102 (ISBN 978-93-86453-48-8)

17. Mondal S. (2018). Impact of polyamines on growth and development of plants. In: Advance Technologies in Agriculture for Doubling Farmer's Income (Eds.) KC Swain, AK Chatterjee, P Kandasamy, New Delhi Publishers, New Delhi, pp. 245-259. ISBN: 978-93-86453-61-7.

18. Panda D., Swain KC., **Mondal S.** and Mondal B. (2018). Artificial intelligence in modern agriculture. In: Advance Technologies in Agriculture for Doubling Farmer's Income (Eds.) KC Swain, AK Chatterjee, P Kandasamy, New Delhi Publishers, New Delhi, pp. 63-69. ISBN: 978-93-86453-61-7.

19. Panda D., **Mondal S.**, Pramanik K. and Chakraborty NR. (2018). Anthocyanin: physiological basis of variation of flower colours. In: Advance Technologies in Agriculture for Doubling Farmer's Income (Eds.) KC Swain, AK Chatterjee, P Kandasamy, New Delhi Publishers, New Delhi, pp. 271-276. ISBN: 978-93-86453-61-7.

20. Pramanik K., Singhal M., Nath R., Bhattacharya S. and **Mondal S.** (2018). Performance of carfentrazone ethyl 20% + sulfuron 25% WG and other herbicide in wheat. In: Advance Technologies in Agriculture for Doubling Farmer's Income (Eds.)

KC Swain, AK Chatterjee, P Kandasamy, New Delhi Publishers, New Delhi, pp. 295-301. ISBN: 978-93-86453-61-7.

21. Bose, B., Kumar, M., Singhal, R.K. and **Mondal, S.** (2018). Impact of seed priming on the modulation of physico-chemical and molecular processes during germination, growth and development of crops. In: *Advances in Seed Priming* (eds.) Amitava Rakshit and HB Singh. Springer, Singapore. Pp. 23-40. ISBN: 978-981-13-0032-5

22. **Mondal, S.** and Panda, D. 2019. Seaweed as Source of Plant Growth Promoters and Bio-Fertilizers: An Overview. In: *Handbook of Algal Technologies and Phytochemicals: Volume II Phycoremediation, Biofuels and Global Biomass Production* (Eds.) Ravishankar, G. A. & Ranga Rao, A. (Vol. 2 pp.111-122). CRC Press, Boca Raton. ISBN: 978-0-367-17819-2, doi: 10.1201/9780429057892

23. **Mondal S.** and Panda D. 2020. Nutrigenomics: An Interface of Gene-Diet-Disease Interaction [Online First], IntechOpen, Mineral Deficiencies - Electrolyte Disturbances, Genes, Diet and Disease Interface (Eds.) Mozsik, G. & Diaz-Soto, G., IntechOpen. ISBN No. 978-1-83881-081-8 DOI: 10.5772/intechopen.94602. Available from: <https://www.intechopen.com/online-first/nutrigenomics-an-interface-of-gene-diet-disease-interaction>

24. **Mondal, S.** and Panda, D. (2020). Phytohormones as stress mitigator in plants. In: *Climate Resilient Agriculture (Vol-2)* (Eds.) Roychowdhury, R., Springer Nature, Switzerland (Accepted).

25. Panda, S., Panda, D. and **Mondal, S.** (2021). Multidrug-resistant bacteria in wastewater. In: *Solid Waste Management, Issues, Concerns and Solution* (Eds.) Majumder, S., Balachandran, S., Santra, S. and Mondal, B. Akshara Prakashini Publication, Bolpur. pp. 156-160.

26. **Mondal, S.**, Panda, D., Mishra, A., Mondal, B. and Hatai, L. (2021). Morpho-physiological Consequences of Waste Water Irrigation on Crop Plants. In: *Solid Waste Management, Issues, Concerns and Solution* (Eds.) Majumder, S., Balachandran, S., Santra, S. and Mondal, B. Akshara Prakashini Publication, Bolpur. pp. 146-151.

27. **Mondal, S.** and Bose, B. (2022). Seed Priming: An Interlinking Technology between Seeds, Seed Germination and Seedling Establishment. In: *Plant Reproductive Ecology - Recent Advances*, Rustagi, A. and Chaudhry, B. (Eds.) Intechopen. <http://doi.org/10.5772/intechopen>. 94800. ISBN: 978-1-83969-494-3, Print ISBN: 978-1-83969-493-6, Available from: <https://www.intechopen.com/online-first/79025>.

28. Panda, D., **Mondal, S.** and Mishra, A. (2022). Liquid biofertilizers from seaweeds: A critical review. In: *Sustainable global resources of seaweeds Volume I Bioresources, Cultivation, Trade, and Multifarious Applications* (Eds.) Rao, A. R. and Ravishankar G. A. Springer Nature Switzerland AG 2022, Pp. 485-501. ISBN: 978-3-030-91954-2. http://doi.org/10.1007/978-3-030-91955-9_26.

29. Dutta, D., **Mondal, S.** and Karmakar, S. (2022). Phytohormones and nitric oxide cross-talk in regulation of stress tolerance in plants. In: *Nitric Oxide in Plants: A molecule with dual roles*. Mohammad Abass Ahaner and Parvaiz Ahmad (Eds.) John Wiley & Sons, Ltd. USA. ISBN: 9781119800125. <http://doi.org/10.1002/9781119800156.ch9>.

30. **Mondal, S.**, Panda, D. and Bose, B (2022). Seed bioprimering with biopesticide: A key to sustainability of agriculture. In: New and Future Developments in Microbial Biotechnology and Bioengineering. H.B. Singh and A. Vaishnav (Eds.). Elsevier, Pp.265-287. ISBN: 978-0-323-85577-8. <https://doi.org/10.1016/B978-0-32-385577.8.00005-6>.
31. **Mondal, S.**, Bose, B., Panda, D. (2023). Effect of Nano-Primering on Maize Under Normal and Stressful Environment. In: Singhal, R.K., Ahmed, S., Pandey, S., Chand, S. (eds) Molecular Interventions for Developing Climate-Smart Crops: A Forage Perspective. Springer, Singapore, Pp.99-107. ISBN:978-981-99-1858-4. https://doi.org/10.1007/978-981-99-1858-4_5.
32. Panda, D., **Mondal, S.**, Bhol, R., and Saha, S. (2024). Phycoremediated algal biomass as biofertilizers for sustainable crop production: An overview. In: Ravishankar, G.A., Rao, A.R., Kim, S.K. (eds.) Algae Mediated Bioremediation: Industrial Prospectives. Wiley-VCH GmbH. Print ISBN: 9783527352470. <http://doi.org/10.1002/9783527843367>.
33. **Mondal, S.**, Yadav, K.N., Vikram, N., and Panda, D. (2024). Physiological and molecular basis of seed primering with nanomaterials. In: Kamel A. Abd-Elsalam (eds) Nanofertilizer Synthesis Methods and Types Nanobiotechnology for Plant Protection, ScienceDirect, Pp-345-358. ISBN: 978-0-443-13535-4. <https://doi.org/101016/B978-0-443-13535-4.00028-6>.
34. Mondal S., Panda D. (2025). Physiological Disorder of Pineapple. In: Deb P., Bhowmick N. (eds) Recent Advances in Pineapple production postharvest and processing Technology. NIPA, GENX ELECTRONIC RESOURCES & SOLUTIONS P.LTD., Pp-259-264. Print ISBN: 978-93-58872-76-7.
35. Choudhury MM, Panda D, Mondal S. (2025). Nano-Primering mediated drought stress tolerance in rice. In: Min Huang (eds.), Rice Cultivation and Consumption-Advancements in Research and Technology, IntechOpen. <http://dx.doi.org/10.5772/intechopen.1012442>.

Conference/Seminar/ Workshop/Exhibition etc. attended (Participated and Presented Papers)

- Mondal, S., P, Vijai, Bose, B. (2009). Hydro and halo hardening of seeds can improve germination, seedling vigour, nitrate assimilation and proline content in rice variety Swarna (MTU 7029). *National Conference on frontiers in Plant Physiology Towards Sustainable Agriculture*, 5-7 November, 2009, Jorhat, Assam.
- Mondal, S. and Bose, B. (2010). Mg(NO₃)₂ primed seeds: A better tool for somatic embryogenesis in rice (variety- Swarna) – a first report. 14th ISCB International Conference, Chemical Biology for Discovery: Perspectives and Challenges, 15-18, Lucknow, India.
- Mondal, S., Singh, R.P., Sen, C. and Bose, B. (2010). High frequency plant regeneration through somatic embryogenesis in rice variety Swarna. 14th ISCB International

Conference, Chemical Biology for Discovery: Perspectives and Challenges, 15-18, Lucknow, India.

- Bose, B., Srivastava, A.K., Sharma, M.K. and Mondal, S. (2010). Seed priming technique enhances germination, seedling stand and yield components in rice. *National Conference of Plant Physiology on Physiological and Molecular Approaches for Crop Improvement under Changing Environment*, November 23-27, Varanasi, U.P.
- Kumar, S., Mondal, S. and Bose, B. (2011). *Enhanced the performance of late sown sesame (Sesamum indicum L.) crop, raised from hydro and nitrate salt primed seeds. Advances in Biotechnological Research in Agri-Horticultural Crops for Sustaining Productivity, Quality Improvement and Food Security, September 14-16, Meerut, U.P.*
- Mondal, S. and Bose, B. (2012). Kinetics study of α -amylase extracted from germinating wheat (var. Malviya 234) endosperm of primed and non-primed seeds. *Proc. 99th Indian Science Congress, Part II, 3-7 January, Bhubaneswar, Orissa.*
- Mondal, S., Jangde, S., P, Vijai, Bose, B. (2012). Plant responses to CO₂: an assessment and appraisal. *International Conference on Climate Change, Sustainable Agriculture and Public Leadership 7-9 February 2012, New Delhi.*
- Bose, B and Mondal, S. (2012). An impact of seed priming on disease resistance- a review. *International Conference on Mycology and Plant Pathology: Biotechnological Approaches*, February 27-29, Varanasi, U.P.
- Mondal, S and Bose B. (2013). Effect of seed priming with hydro, salt and PGR at early growth stage of rice. *National Seminar on Enhancing Water Productivity in Agriculture*, March 8-9, Varanasi, U.P., 341-342.
- Mondal, S and Bose B. (2013). Effect of kinetin primed seeds on somatic embryogenesis of rice. *National Seminar on Recent Advances in Rice Genomics and Biotechnology*, March 23-24, Visva-Bharati, Santiniketan, W.B., pp 51.
- Mondal, S and Bose B. (2013). An impact of rice seed priming on NaCl stress tolerance through tissue culture techniques. *International Conference, Harmony-2013*, November 11-13, Gorakhpur, U.P., pp 144.
- Mondal, S., Mondal, S., Bej, B. (2013). Arid and wasteland utilization by bio-diesel plant jatropha cultivation. *5th Indian Youth Science Congress*, December 6-9, Visva-Bharati, Santiniketan, W.B., pp 196.
- Mondal, S., Bej, B., Sen, S., Mondal, S. and Barik, A.K. (2014). Prospect of water hyacinth (*Eichhornia crassipes*) for ecological and socio-economic utilization of aquatic weed. *National Seminar on Agriculture and Bio-Security in Changing Scenario*, February 1-3, Visva-Bharati, Sriniketan, pp 14.
- Participated and presented paper in International Seminar on 'Integrating agriculture and allied research: Prioritizing future potentials for secure livelihoods' (ISIAAR) organized by Crop and Weed Science Society (CWSS), BCKV, Mohanpur, WB, during 6 - 9 November, 2014 entitled 'Effects of calcium nitrate seed priming on somatic embryogenesis of rice (var. BPT-5204)'.

- Participated and presented paper in National Conference of Plant Physiology-2014 on 'Frontiers of plant physiology research: Food security and environmental challenges' organized by OUAT, Bhubaneswar, during November 23-25, 2014. Entitled "Aging of seeds affects the germination physiology of wheat".
- Participated in the National Seminar on 'Indian Literature, Science and Human Rights: A dialogue' organized by the National Human Rights Commission in collaboration with Visva-Bharati, Santiniketan on 5 -6th August, 2014.
- Participated in International Workshop on Climate studies and emerging issues organized by the Centre for Climate Studies, Visva-Bharati, Santiniketan during March 14-15, 2015.
- Participated and presented paper entitled "Response of irrigation, weed and nutrient management to yield and economics of hybrid rice cultivation under SRI during summer season" in the National Seminar on Soil Health: Key to Sustainable Agriculture organized by Soil Science & Agriculture Chemistry, Palli Siksha Bhavana, Visva-Bharati, Sriniketan during 14-15 November 2015.
- Participated and presented paper entitled "Seed Priming: A Plant Physiological Technology Boon for Crop Improvement in Agriculture" in the National Seminar on Sustainable Family Farming for Food, Nutritional & Livelihood Security organized by Department of Agricultural Extension , Agricultural Economics & Agricultural Statistics, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan during 5-6 March 2016.
- Participated and presented paper in the National Seminar on "Nutrition and Wellness" organized by Physical Education Unit, Palli Siksha Bhavana, Visva-Bharati, Sriniketan during 7-8th November 2016 entitled 'Medicinal and therapeutic potential of plants of apiaceae family: An overview'
- Participated and presented paper in the National Conference on 'Self Sufficiency in Pulses: Challenges and Way Forward" jointly organized by Palli Siksha Bhavana, (Institute of Agriculture), Visva-Bharati and The Bengal Chamber of Commerce and Industry during 19 - 20th November, 2016
- Participated and presented paper in the National Symposium on "Recent Trends in Agriculture and Allied Sciences for Better Tomorrow (NSRTAS – 2016)" jointly organized by Dept. of Animal Science, Palli Siksha Bhavana, Visva-Bharati, Sriniketan and Society of Bio-resource, Environment and Agricultural Research, Santiniketan on 4th December, 2016 entitled Effect of KNO₃ solution on Mg(NO₃)₂ primed seeds during germination phase of rice (var. Swarna).
- Participated and presented paper in the 1st International Conference on "Bio-Resource, Environment and Agricultural Science (ICBEAS)" organized by The Society of Bio-Resource, Environment and Agricultural Research, Santiniketan and Institute of Agriculture, Visva-Bharati, Santiniketan, WB. 4-6th Feb, 2017. Entitled 'Effect of seed bio-inoculation as biochemical mediated inducers of resistance against insect pests of

green gram *Vigna radiata* (L. Wilczek).

- Participated and presented paper in the National Symposium on Towards Climate Smart Agriculture-A Key to Livelihood Security organized by Institute of Agricultural Science, University of Calcutta during 9-11 December, 2017, entitled “Plant defence signaling mechanism”.
- Participated and presented paper in the One day National Seminar Cum Panel Discussion on Doubling Farmers’ Income: Role of Agricultural Mechanization organized by Department of Agricultural Engineering, Palli Siksha Bhavana, Visva-Bharati, Sriniketan during 29th January, 2018, entitled “Impact of calcium nitrate seed priming on somatic embryogenesis of rice (var. MTU 7024)”.
- Participated and presented paper in the International Interdisciplinary Conference on Road Map for the Development of Eco-Tourism in and around Santiniketan and Birbhum organized by Public Relation Office, Visva-Bharati, with Ministry of Tourism, Govt. of India & Dept. of Tourism, Govt. of West Bengal during 23-25 March, 2018, entitled “Avenue Trees In And Around Santiniketan: Morphophysiological Effect of Solid Particulate Matter Deposits and Their Potential For Mitigation Of Air Pollution- A Review”
- Participated and presented paper in the National Seminar on Mixed Farming - a Traditional Practice to Enhance the Income of a Farmers organized by Department of Animal Science, Institute of Agriculture, Visva-Bharati & The Society of Bio-resource, Environment and Agricultural Research, Santiniketan during 24-25 March, 2018, entitled “Physiological indices and pigment content of chickpea as influenced by moisture stress and growth regulators”
- Participated and presented paper in the International Conference on Development of Cultural Tourism in and Around Santiniketan and Birbhum organized by Public Relations Office, Visva-Bharati, Santiniketan during Nov 16-18, 2018, entitled “Sustainability of ecotourism in the advance of Urbanization: Santiniketan a case study”
- Participated and presented paper in the International Conference on Development of Cultural Tourism in and Around Santiniketan and Birbhum organized by Public Relations Office, Visva-Bharati, Santiniketan during Nov 16-18, 2018, entitled “Promotion of cultural tourism through festivals- Santiniketan a case study”.
- Participated and presented paper in the International Conference on Development of Cultural Tourism in and Around Santiniketan and Birbhum organized by Public Relations Office, Visva-Bharati, Santiniketan during Nov 16-18, 2018, entitled “Ecophysiological consequences of artificial light at night on plants: An overview of plants of Santiniketan”.
- Participated and presented paper in the International Conference on Livelihood Promotion, Biodiversity Conservation and Social Security in Indian Sundarbans organized by Department of Plant Protection, PSB, Visva-Bharati and Techno India University, Kolkatta, Hiranmaypur Agro-horticultural Society for Technology and Rural Development, Basanti, South 24 Parganas during December 7-9, 2018, entitled “Seed Priming: An Epigenetic Change”

- Participated and presented paper in the National Symposium on Role of Resource Management in Agriculture in the Context of Food Security, Nutrition and Economy organized by The Agricultural Society of India in collaboration with Institute of Agricultural Science, University of Calcutta during December 15-17, 2018, entitled Plant defense signaling mechanism”.
- Participated and presented paper in the National Seminar on “Approaches Towards Sustainable Development” organized by A.K. Dasgupta Centre for Planning and Development, Visva-Bharati, Santiniketan on 29th January, 2019, entitled ‘Seed priming: An effective agrotechnique for sustainable agriculture’.
- Participated and presented paper in the National Seminar on “Sustainable resource management for enhancing farm income, nutritional security and livelihood improvement” organized by Department of Agronomy, Palli Siksha Bhavana (Institute of Agriculture), Visva-Bharati, Sriniketan, W.B. India, on 1-3 February, 2019, entitled ‘Effect of zinc sulphate priming treatment in the germination physiology of lentil seeds’.
- Participated and presented paper in the second International Conference on “Media and Communication in sustainable development” organized by Centre for Journalism and Mass Communication, Visva-Bharati, Santiniketan, 11-13 February, 2019, entitled ‘Seaweed extracts as source of bio-fertilizers and biostimulants- An avenue for sustainable agriculture’.
- Participated and presented paper in the second International Conference on “Media and Communication in sustainable development” organized by Centre for Journalism and Mass Communication, Visva-Bharati, Santiniketan, 11-13 February, 2019, entitled ‘Carbon, water and land foot prints; indicators of sustainable development’.
- Participated and presented paper in the International Seminar on “Ecological and Environmental Sustainability: Way forward for Livelihood Security” Organized by Department of Plant Pathology, PSB, Visva-Bharati, Sriniketan and Hiranmaypur Agro-horticultural Society for Technology and Rural Development, Basanti, South 24 Parganas, 25-26 September, 2019, entitled ‘Effect of foliar application of micronutrients and growth regulators on yield attributes chilli’.
- Participated and presented paper in the International Conference on Road Map for the Development of Rural Tourism in and around Birbhum organized by Visva-Bharati, Santiniketan during 16.11.2019-18.11.2019
- Participated and presented paper in the International Plant Physiology Virtual Conference-2020 on Prospects of Plant Physiology for Climate Proofing Agriculture organized by Indian Society of Plant Physiology, New Delhi. Title of presentation: Heavy metal Stress Signalling Mechanism in Plants, 06.12.2020-07.12.2020.
- Participated and presented paper in the International Plant Physiology Virtual Symposium organized by ICAR-Sugarcane Breeding Institute, (ICAR-SBI) Coimbatore, India & Indian Society for Plant Physiology, New Delhi. Title of presentation: Effect of Zinc Sulphate and Boric acid seed priming on germination Physiology of Lentil (*Lens culinaris* L.), 11.03.2021-12.03.2021.
- Participated and presented paper in ‘The 7th International Conference on Agricultural & Biological Sciences (ABS 2021)’ organized by Bohai University, China via Online with MS Team. Title of the presentation: Seed bio-priming with seaweed extracts improve the

growth and development as well as abiotic stress tolerance ability of crop plants, 09.08.2021-11.08.2021.

- Participated and presented paper in the Emerging Scientist Virtual conferences organized by Asian Council of Science Editors, Deira Dubai, UAE. Title of presentation: Magneto-Priming: A multi-pronged abiotic stress mitigation approach, 20.02.2022-22.02.2022.
- Participated and presented paper in ‘The 8th International Conference on Agricultural & Biological Sciences (ABS 2022)’ organized by Bohai University, China via Online with MS Team. Title of the presentation: Perspectives of moringa leaf extract as seed bioprimer agent under natural and stressful condition (ABS 4110), 08.08.2022-11.08.2022.
- Participated and presented paper in ‘National Symposium on Emerging Innovations in Plant Molecules for Achieving Food and Nutritional Security’ organized by ICAR-IARI, New Delhi, held at Navsari Agricultural University, Navsari-396450. Title of Presentation: Sulfate transporters in developing seeds of *Arabidopsis thaliana*. 22.09.22-23.09.22.
- Participated and presented paper in ‘International Conference on Biotic and Abiotic Stress of Crop Plants and their Sustainable Management’ organized by Department of Plant Pathology, PSB, Visva-Bharati, Sriniketan-731236. Title of Presentation: Performance of transplanted mustard cultivars under different date of sowing in lateritic soil of West Bengal. 02.03.2023.
- Participated and presented paper in ‘International Seminar on “Dr. B.R. Ambedkar’s Thoughts in Contemporary India and World”’ organized by SC, ST, OBC Employees Welfare Association of Visva-Bharati and Department of Sociology, Purnidevi Chowdhuri Girls’ College. Title of Presentation: Role of Biopesticide in Agriculture. 14.04.2023.
- Participated and presented paper in ‘3rd Biotic Science Congress, 2023 and International Conference on “Advancement in Plant Health Research- Retrospect & Prospect”’ organized by Society for Biotic and Environmental Research (SBER) and Department of Agricultural Entomology, PSB, VB, Sriniketan, WB, India. Title of the Presentation: Effect of micronutrient priming with zinc and boron on root characteristics of lentil with various irrigation regimes in the lateritic belt of the sub-humid tropical region. Date:07.12.23 – 08.12.2023.
- Participated and presented paper in ‘3 days International Conference on “Impact of Climate Changes on Global Food, Livestock, Livelihood and Environmental Security: Advanced Approaches and Mitigation Strategies”’ organized by NAU Navsari, Gujrat, India and NADCL, Baramulla, UT of J&K, India. Title of the Presentation: Effect of micronutrient priming on growth and productivity of lentil with different irrigation regimes in the lateritic belt of the sub-humid tropical region. Date: 28.12.2023 – 30.12.2023.
- Participated and presented paper in ‘National Seminar on “Sustainable Agriculture, Rural Development and Future Food Security in India: An Interdisciplinary Approach”’ organized by Agricultural Economics and Social Science Research Association (AESSRA), New Delhi and Department of Agricultural Economics, PSB, VB, Sriniketan-731236. Date: 01.03.2024 – 2.03.2024.
- Participated and presented paper in International Conference on “Sustainable Development: Emergent Issues” organized by REC, PSV, VB, and Foundation of

Practising Geographers, Kolkata. Title of the Presentation: Mitigation of Climate Change Through Natural Farming. Date: 20.03.2024 – 21.03.2024.

- Participated and presented paper in National Seminar on “Sustainable Management of Natural Resources for Food Security and Livelihood Promotion Under Climate Change Scenario” organized by Department of Biological Sciences (Agriculture), Midnapore City College, Midnapore. Title of the Presentation: Study on bio-stimulant and management strategies of seed and soil borne diseases of pulse crops. Date: 29.03.2024 – 30.03.2024.
- Participated and presented paper in International Conference on “2nd International Webinar on Cardiology and Cardiovascular research” organized by Scientex Conferences (Hybrid mode), Bangkok, Thailand. Title of the Presentation: Nutrigenomics in controlling cardiovascular diseases. Date: 16.05.2024-17.05.2024.
- Participated and presented paper in National Conference on National Conference on “Digital Interventions and Sustainable Livelihoods in Hill-Ecosystem: Towards Vision Viksit Bharat@2047” organized by Indian Council of Social Science Research (ICSSR), New Delhi and Department of Agricultural Economics, PSB, WB, Sriniketan-731236. Title of the Presentation: Effect of green synthesized silver and Zinc nanoparticles in germination physiology of rice. Date: 10.01.2025 – 11.01.2025.
- Participated and presented paper in National Seminar cum Farmers’ Training Programme on “Role of Traditional Indian Knowledge System (IKS) for Sustainable Mechanization in Rice and Groundnut Crop” organized by Department of Agricultural Engineering, Institute of Agriculture, Visva-Bharati, Santiniketan. Title of the Presentation: Gibberellin is a key modulator of jute growth and fibre yield. Date: 20.02.2025-23.02.2025.
- Participated and presented paper in AAAS National Conference on “Transformative Approaches and Smart Technology in Plant and Animal Health for Sustainable and Climate-Ready Agriculture” organized by Department of Plant Pathology, Palli Siksha Bhavana, Visva-Bharati and Academy for advancement of Agricultural Sciences (AAAS). Title of the Presentation: Mitigation dynamics of ABC transporter genes in *Oryza sativa indica* and allied species associated with heavy metal stress. Date: 18.09.2025-19.09.2025.

Refresher/ Orientation/ Training Courses Attended

1. Participated and successfully completed the 96th Orientation Programme from 4.07.2014 to 31.07.2014, Academic Staff College, The University of Burdwan, Burdwan.
2. Participated and successfully completed the Refresher Course in Biological Sciences, from 23.09.2015 to 13.10.2015, Human Resource Development Centre, The University of Burdwan, Burdwan.
3. Participated and successfully completed the Massive Open Online Course (MOOC) on ‘Dynamics of Teaching-Learning Held during 1-30, November, 2018, organized by ICAR-National Academy of Agricultural Research Management, Rajendranagar, Hyderabad-500030, Telangana, India
4. Participated and successfully completed the 10-Day National Workshop on Research Methodology Using Statistical Tools, Techniques and Packages (SPSS & R), Organized by the Department of Agricultural Economics and Agricultural Statistics (ES), PSB, Visva-Bharati, Sriniketan-731236, WB, from February 15-24, 2019.

5. Participated and successfully completed the 5-Day (one week) workshop on ‘Geoinformatics in agriculture and environment’ organized by Department of Agricultural Engineering, PSB, Visva-Bharati, Sriniketan, WB, from March 25-29, 2019.
6. Participated and successfully completed the Massive Open Online Course (MOOC) on ‘Dynamics of Teaching-Learning Held during 1-30, November, 2019, organized by ICAR-National Academy of Agricultural Research Management, Rajendranagar, Hyderabad-500030, Telangana, India
7. Participated and successfully completed the 10 course "Advanced application of 'R' in Planning, Research & Development” held from 2nd-11th December, 2019 at A.K. Dasgupta Centre for Planning and Development, 33, Purbaplli, Santiniketan, Visva-Bharati.
8. Participated and successfully completed the Massive Open Online Course (MOOC) on ‘Theoretical Foundations of Educational Technology’ held during 1-30, June, 2021, organized by ICAR-National Academy of Agricultural Research Management, Rajendranagar, Hyderabad-500030, Telangana, India.
9. Participated and successfully completed the Massive Open Online Course (MOOC) on ‘Digital Assessment and Evaluation Methodologies’ held during 1-30, September, 2022, organized by ICAR-National Academy of Agricultural Research Management, Rajendranagar, Hyderabad-500030, Telangana, India
10. Participated and successfully completed the 14 Day’s National Workshop on ‘Statistical Methods in Research using R’, Visva-Bharati, Santiniketan, during 26.02.2024 – 10.03.2024, AKD Centre for Planning and Development, VB, Santiniketan, WB, India.
11. Participated and successfully completed the 9 Day’s Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by Regional Institute of Education, Mysore (Programme ID – MMC-041-2025-JAN-B-03226) from 23rd to 31st January, 2025.

M.Sc. and Ph. D. students guided

1. Guided 1 M.Sc.(Ag) students
2. Successfully awarded 2 Ph.D. students (1) Dr. Spurti Mondal, (2) Arindam Ghosh, (3) KG Vijay Anand

On going Research Projects in the Department

Name of the project	Sponsoring Agencies	Amount sanctioned (Rs.)
Study on Bio-Efficacy, Phytotoxicity and Residue analysis of Some Herbicides in Tea and non-cropped area	New Delhi - 110 025, India	1207500.00
Evaluation of effect of Crazy Pro on growth, quality and yield parameters of	GSP Crop Science Pvt. Ltd. Ahmedabad, Gujrat	276120.00

tomato crop		
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Extension activities

1. Conducted coaching classes on the subject 'Plant Physiology, Biochemistry, Molecular Biology and Plant Tissue Culture' for the students of B. Sc. (Ag.) Hons. of Sem-VII and Sem-VIII for ICAR conducted JRF examination.
2. Radio talk was given on the topic entitled 'Seed priming on different crops' Dated: 13.02.2015
3. Radio talk was given on the topic entitled 'Role of Plant Growth Regulators in growth and development of crops' Dated: 13.02.2015
4. Radio talk was given on the topic entitled 'Seed priming on Rabi crops' Dated: 03.12.2017
5. Radio talk was given on the topic 'Save environment through organic cultivation'; Dated: 05.09.2018
6. Radio talk was given on the topic 'Role of women in agriculture' Dated: 05.09.2019
7. Programme on Doordarshan Kendra Santiniketan topic 'Organics versus Inorganics in Agriculture' Dated: 24.09.2019
8. Radio talk was given on the topic 'Role of organics in agriculture' Dated: 12.02.2021
9. Radio talk was given on the topic 'Lentil cultivation in winter season and its qualitative improvement by applying seed priming technology' Dated: 03.11.2021.
10. Radio talk was given on the topic 'Benefits of Pulses and the cultivation of summer mung' Dated: 02.03.2022
11. Radio talk was given on the topic 'Perspectives of rainfed kharif rice' Dated: 27.07.2022
12. Radio talk was given on the topic 'Role of micronutrient in summer crops' Dated: 18.02.2023
13. Radio talk was given on the topic 'Role of seed priming in farming' Dated: 15.04.2023
14. Radio talk was given on the topic 'Seed Enhancement' Dated: 24.06.2023
15. Radio talk was given on the topic 'Role of micronutrients in winter crops' Dated: 20.10.2023
16. Radio talk was given on the topic 'Importance of bio-fertilizers in agriculture' Dated: 08.02.2024.
17. Radio talk was given on the topic 'Potato cultivation in winter season' Dated: 17.12.2024.
18. Radio talk was given on the topic 'Organic farming' Dated: 21.04.2025.
19. Radio talk was given on the topic 'Method of application of organic biofertilizer in agricultural field' Dated: 06.06.2025.
20. Acted as Joint Co-Ordinator of the Farmer's Training Program entitled 'Improvement of crop yield through plant growth regulators' under Development Action Plan for Scheduled Cast (DAPSC)/SC Sub-Plan 2023-24. Dated: 23.03.2024
21. Acted as Joint Co-Ordinator of the Farmer's Training Program entitled 'Identification of nutrient and physiological disorders in crops and their management' under Development Action Plan for Scheduled Cast (DAPSC)/SC Sub-Plan 2023-24. Dated: 27.03.2024
22. Acted as Co-Chairperson of the 3rd Biotic Science Congress, 2023 and International Conference on "Advancement in Plant Health Research- Retrospect & Prospect"

- organized by Society for Biotic and Environmental Research (SBER) and Department of Agricultural Entomology, PSB, VB, Sriniketan, WB, India. Date:07.12.23 – 08.12.2023
23. Acted as Rapporteur of the conference ‘National Seminar on “Sustainable Agriculture, Rural Development and Future Food Security in India: An Interdisciplinary Approach” organized by Agricultural Economics and Social Science Research Association (AESSRA), New Delhi and Department of Agricultural Economics, PSB, VB, Sriniketan-731236. Date: 01.03.2024 – 2.03.2024.
 24. Radio talk was given on the topic ‘Importance of potato cultivation in winter’ Dated: 17.12.2024.
 25. Acted as Co-Chairperson of the National Seminar cum Farmers’ Training Programme on “Role of Traditional Indian Knowledge System (IKS) for Sustainable Mechanization in Rice and Groundnut Crop” organized by Department of Agricultural Engineering, Institute of Agriculture, Visva-Bharati, Santiniketan, WB, India. Date: 20.02.2025-23.02.2025.
 26. Acted as Member of Organized Committee in the ‘National Conference on “Digital Interventions and Sustainable Livelihoods in Hill-Ecosystem: Towards Vision Viksit Bharat@2047” organized by Indian Council of Social Science Research (ICSSR), New Delhi and Department of Agricultural Economics, PSB, VB, Sriniketan-731236. Date: 10.01.2025 – 11.01.2025.
 27. Acted as Rapporteur of the ‘National Conference on “Digital Interventions and Sustainable Livelihoods in Hill-Ecosystem: Towards Vision Viksit Bharat@2047” organized by Indian Council of Social Science Research (ICSSR), New Delhi and Department of Agricultural Economics, PSB, VB, Sriniketan-731236. Date: 10.01.2025 – 11.01.2025.
 28. Acted as Co-chairman of the National Seminar cum Farmers’ Training Programme on “Role of Traditional Indian Knowledge System (IKS) for Sustainable Mechanization in Rice and Groundnut Crop” organized by Department of Agricultural Engineering, Institute of Agriculture, Visva-Bharati, Santiniketan. Date: 20.02.2025-23.02.2025.
 29. Acted as Co-Chairperson of the AAAS National Conference on “Transformative Approaches and Smart Technology in Plant and Animal Health for Sustainable and Climate-Ready Agriculture” organized by Department of Plant Pathology, Palli Siksha Bhavana, Visva-Bharati and Academy for advancement of Agricultural Sciences (AAAS). Date: 18.09.2025-19.09.2025.

Academic Distinctions gained

1. Life Member of Indian Society of Plant Physiology, IARI, New Delhi
2. Life Member of Crop and Weed Science Society, BCKV, Nadia, West Bengal
3. Life Member of The Indian Science Congress Association, Kolkata, West Bengal
4. Life Member of Society of Bio-resource, Environment and Agricultural Research, Sriniketan, West Bengal
5. Life Member of Society of Plant Research, Greater Noida (West), India
6. Member of Editorial Board of International Journal of Bio-resource, Environment and Agricultural Sciences, Santiniketan
7. Acted as Organizing secretary of the National Conference Seminar on Mixed Farming - a Traditional Practice to Enhance the Income of a Farmers organized by Department of

Animal Science, Institute of Agriculture, Visva-Bharati & The Society of Bio-resource, Environment and Agricultural Research, Santiniketan during 24-25 March, 2018.

8. Acted as reviewer of different International and National Journals like *Journal of Soil Science and Plant Nutrition* (Springer), *Notulae Botanicae Horti Agrobotanici Cluj-Napoca*, *Journal Agronomy Research*, *Asian Journal of Biotechnology and Bioresource Technology*, *Scientific Research Publishing group*, *Agronomy (MDPI)*, *Sustainability (MDPI)*, *Biology (MDPI)*, *International Journal of Molecular Sciences (MDPI)*, *Plant Growth Regulation (Springer)*, *Gene (MDPI)*, *SNAPP (Scientific Reports)*, *Chemical and Biological Technologies in Agriculture, Agriculture, Discover Plants*
9. Acted as an external examiner of different universities viz. Bidhan Chandra Krishi Viswavidyalaya, Mohanpur and Uttar Banga Krishi Viswavidyalaya, Pundibari
10. Acted as paper setter of Bidhan Chandra Krishi Viswavidyalaya, Mohanpur and Uttar Banga Krishi Viswavidyalaya, Pundibari, Tripura Agricultural University.