

## CURRICULUM-VITAE OF DR. DEBASISH PANDA



**Name:** Dr. Debasish Panda

**Designation:** Associate Professor of Plant Physiology

**Date of Joining:** 18<sup>th</sup> March 2004

**Academic Qualification:**

| Degree             | Year | College/Institute/University              | Division/<br>Class | Discipline/Thesis           |
|--------------------|------|---|--------------------|-----------------------------|
| Ph.D.(Agriculture) | 2013 | Visva-Bharati University,<br>Santiniketan | -                  | Plant Physiology            |
| M.Sc.(Ag)          | 2003 | OUAT, Bhubaneswar                         | First              | Plant Physiology            |
| B.Sc.(Ag)          | 2000 | OUAT, Bhubaneswar                         | First              | All Agriculture<br>Subjects |

**Contact Address:**

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**Research areas:**

Stress Physiology, Plant growth regulation, Mineral Nutrition, Nanotechnology

**Awards:**

- Qualified UGC-CSIR (NET) JRF in Life Sciences twice in June and December 2002
- Winner of Bronze Medal in Poster making in the second All India Inter Agricultural University Youth Festival, held at Assam Agricultural University, Jorhat, Assam during 14 to 18<sup>th</sup> October 2000.
- Member of the One Act Play team, adjudged second best team in the second All India Inter Agricultural University Youth Festival, held at Assam Agricultural University, Jorhat, Assam during 14 to 18<sup>th</sup> October 2000.
- Recipient of National Scholarship from MHRD, Govt. of India (1992)

**Teaching Experience:**

- 21 years in Visva-Bharati (since March 2004)

**Research Experience:**

- 21 years in Visva-Bharati

**Academic distinction & Membership in Journal Societies:**

- Life member of Indian Society for Plant Physiology, New Delhi
- Life Member of Indian Society of Soil Biology and Ecology, Bengaluru
- Life Member of Crop and Weed Science Society, BCKV, Nadia, West Bengal
- Acted as an external examiner and paper setter of different Agricultural Universities (OUAT, Bhubaneswar;BAU, Sabour; BCKV, Mohanpur and SOA University, Bhubaneswar)
- Editor of International Journal of Bio-resource, Environment and Agricultural Sciences (ISSN 2454-3551)
- Reviewer of the journals *International Journal of Phytoremediation* (Taylor & Francis), *Chemosphere* (Elsevier) and *Ecological Indicators* (Elsevier), *Plant Molecular Biology Reporter* (Springer) and *Plant Growth Regulation* (Springer)

**Refresher/ Orientation/ Training Courses Attended:**

- Participated in 21-days 6<sup>th</sup> UGC Refresher Course in Computer Studies at UGC Academic Staff College, University of Burdwan during 29.01.2008-18.02.2008.
- Participated in 28-days 70<sup>th</sup> UGC Orientation Programme at UGC Academic Staff College, University of Burdwan during 16. 05. 2009-12. 06. 2009.
- Completed 21-days 23<sup>rd</sup> Refresher Course in Environmental Studies at UGC Academic Staff College, University of Burdwan during 18. 02. 2014-10. 03. 2014.
- Completed 40 days training on Cellular and Molecular Biology at School of Life Sciences, Jawaharlal Nehru University, New Delhi during 26. 05. 2015-04.07.2015.
- Completed 7 days Short term Course in Remote Sensing & GIS at UGC-Human Resource Development Centre, University of Burdwan, Burdwan during 29. 12. 2015-04. 01. 2016.
- Completed MOOC Course on “Dynamics of Teaching-Learning” organized by ICAR-National Academy of Agricultural Research Management, Hyderabad during 01.11.2018 -30.11.2018.
- Completed MOOC Course on “Teaching Excellence” organized by ICAR-National Academy of Agricultural Research Management, Hyderabad during 01.11.2019 -30.11.2019.
- Participated in the National Workshop on Data Analysis using Statistical Tools, Techniques and Packages with Special Emphasis on SPSS and R organized by Department of Agricultural Statistics, Palli Siksha Bhavana, Visva-Bharati, Sriniketan during 23.02.2020-03.03.2020.
- 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) during 23rd to 31st January, 2025.

- Participated and successfully completed the 28 Day's MOOC on 'Artificial Intelligence in Agriculture' Organized by TELAGE-NAARM, Hyderabad, during 01.02.2025 – 28.02.2025.

#### **Seminar/ Symposium/ Workshop/Training programme organized:**

- Acted as Coordinator of the Farmer's Training Programme on 'Improvement of crop yield through plant growth regulators' under the Development Action Plan for Scheduled Cast (DAPSC)/SC Sub-Plan 2023-24 organized by the Dept. of Crop Physiology, Palli Siksha Bhavana on 23.03.2024
- Acted as Coordinator of the Farmer's Training Programme on 'Identification of nutrient and physiological disorders in crops and their management' under the Development Action Plan for Scheduled Cast (DAPSC)/SC Sub-Plan 2023-24 organized by the Dept. of Crop Physiology, Palli Siksha Bhavana on 27.03.2024.

#### **M.Sc. and Ph. D. students guided:**

- Guided 2 Ph.D. and 5 M.Sc. (Ag) students
- Presently 2 Ph.D. students are doing research under my guidance.

#### **Significant publications:**

##### **Book Chapters:**

1. Sugarcane Physiology. In: Sugarcane Development- Technological Interface between Tradition and Modernity (D. Das Gupta ed.) Agrobios (India), 2009, pp.57-67 by **D. Panda**, G.C. Malik and D.C. Ghosh (ISBN No. 81-7754-394-6)
2. **Panda, D.**, Hatai, L., Pramanik, K. and Saren, B. K. 2012. Role of coastal vegetations in mitigation of cyclonic storms: Super cyclone in Orissa a case study. In: K.M. B. Rahim, D. Sarkar and B. C. Roy (Ed.)- Sustainable Agriculture and Environment. New Delhi Publishers, New Delhi, pp. 277-290
3. Saren, B. K., Pramanik, K. and **Panda, D.** 2012. A Climatic Aberrant: Drought and its Mitigation. In: K.M. B. Rahim, D. Sarkar and B. C. Roy (Ed.)- Sustainable Agriculture and Environment. New Delhi Publishers, New Delhi, pp.265-276
4. Jute Physiology. In: Jute Development- Technological Interface between Tradition and Modernity (D. Das Gupta ed.) Agrobios (India), 2014, pp.17-35 by **Debasish Panda**, Binoy Kumar Saren and Kalipada Pramanik (ISBN No. 978-81-7754-526-5)
5. 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
6. **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
7. 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
8. **Panda, D.**, Mondal, B., Mukherjee, A., Mondal, S., Pramanik, K. and Swain, K. C. 2016. Brahmi (*Bacopa monnieri*)-An Important Medicinal Plant with Immense Therapeutic Uses. In: Trailing the Footprints of Nutrition & Wellness: Entrapping Foothold of Healthy Nation(Eds.) S. Chowdhury, D. Sarkar, B. Mondal, A. Mukherjee, K. Chatterjee. Anand Prakashan, Kolkata-700007, p.319-326 (ISBN 978-81-88904-88-4).

9. Dash, S., **Panda, D.**, Duary, B., Behera, B. and Sethi, D. 2016. Various Physiological Roles of Potassium; Special Emphasis on Potato: A Review. In: Trailing the Footprints of Nutrition & Wellness: Entrapping Foothold of Healthy Nation (Eds.) S. Chowdhury, D. Sarkar, B. Mondal, A. Mukherjee, K. Chatterjee. Anand Prakashan, Kolkata-700007, p.327-338.
10. **Panda, D.**, Mondal, B., Chakraborty, N. R. and Pramanik, K. 2016. Agriculture Education in an Era of Climate Change: An Indian Perspective. In: Education and Development (Eds.) S. K. Paul. Arpan Publications, New Delhi-110002, p.226-237. (ISBN 978-93-82135-96-8)
11. Char, R., Mondal B. and **Panda, D.** 2017. Traditional Herbal Medicine in Bribhum District of West Bengal. In: Relevance of Dr. B. R. Ambedkar for Inclusive Development in India: Inclusive Development, Agriculture and Sustainable Rural Development (Volume-II) (Eds.) B. Mondal, B. Das, A. Lokho, G. Mandal, G. C. Malik and S. Ghosh. New Delhi Publishers New Delhi-110059, p.135-140 (ISBN 978-93-85503-58-0)
12. **Panda, D.**, Mondal, S., Mondal, B. and Pramanik, K. 2017. Food and Nutritional Security through Biofortification of Staple Food Crops. In: Relevance of Dr. B. R. Ambedkar for Inclusive Development in India: Inclusive Development, Agriculture and Sustainable Rural Development (Volume-II) (Eds.) B. Mondal, B. Das, A. Lokho, G. Mandal, G. C. Malik and S. Ghosh. New Delhi Publishers New Delhi-110059, p.254-264 (ISBN 978-93-85503-58-0)
13. **Panda, D.** and Mondal, B. 2017. Ecophysiological and Agricultural Significance of Indicator Plants. In: Relevance of Dr. B. R. Ambedkar for Inclusive Development in India: Inclusive Development, Agriculture and Sustainable Rural Development (Volume-II) (Eds.) B. Mondal, B. Das, A. Lokho, G. Mandal, G. C. Malik and S. Ghosh. New Delhi Publishers New Delhi-110059, p.265-271 (ISBN 978-93-85503-58-0)
14. **Panda, D.** Pramanik, K. and Mondal, B. Legislative Measures in India for Land Reforms, Input Management in Agriculture & Food Security: Steps towards Inclusive Growth. In: Relevance of Dr. B. R. Ambedkar for Inclusive Development in India: Inclusive Development, Agriculture and Sustainable Rural Development (Volume-II) (Eds.) B. Mondal, B. Das, A. Lokho, G. Mandal, G. C. Malik and S. Ghosh. New Delhi Publishers New Delhi-110059, p.272-282 (ISBN 978-93-85503-58-0)
15. Chakraborty, N.R., Duary, B., Bhattacharya, S. and **Panda, D.** 2016. Development of Climate Ready Crop for Food Security. In: Green Energy and Sustainable Environment (Eds.) S. Chaudhury, A.K. Hazra and S. Balachandran. Akshar Prakashni, Bolpur, Santiniketan, Birbhum, p.153-171 (ISBN 978-81-922916-6-6)
16. 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)
17. Pramanik, K. and **Panda, D.** 2018. Response of Chickpea to Biofertilizers and Phosphorous on Physiological Parameters, Yield Components and Yield under Rainfed Condition. In: Human Rights and Social Justice: Agricultural Issues and Concern (Eds.) B. Mondal, A. Lokho and G. Mondal. New Delhi Publishers, New Delhi, p.49-56 (ISBN 978-93-86453-48-8)
18. **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)
19. **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)
20. **Panda, D.**, Swain, K.C., Mondal, S. and Mondal, B. 2018. Artificial Intelligence in Modern Agriculture. In: Advance Technologies in Agriculture for Doubling Farmer's Income (Eds.) K.

- C. Swain, A.K. Chatterjee and P. Kandasamy. New Delhi Publishers, New Delhi, p.63-70 (ISBN: 978-93-86453-61-7).
21. Chakravorty, N. R. and **Panda, D.** 2018. Enhancement of Pulses Production Through Genetic Improvement in Lateritic Belt of West Bengal. In: Advance Technologies in Agriculture for Doubling Farmer's Income (Eds.) K. C. Swain, A.K. Chatterjee and P. Kandasamy. New Delhi Publishers, New Delhi, p.261-270 (ISBN: 978-93-86453-61-7).
  22. **Panda, D.**, Mondal, S., Pramanik, K. and Chakravorty, N.R. 2018. Anthocyanin: Physiological Basis of Variation of Flower Colours. In: Advance Technologies in Agriculture for Doubling Farmer's Income (Eds.) K. C. Swain, A.K. Chatterjee and P. Kandasamy. New Delhi Publishers, New Delhi, p.271-276 (ISBN: 978-93-86453-61-7).
  23. Mondal, S. and **Panda, D.** 2019. Seaweed as Source of Plant Growth Promoters and Bio-Fertilizers: An Overview. In: Ravishankar, G. A. & Ranga Rao, A. (Eds.), Handbook of Algal Technologies and Phytochemicals: Volume II Phycoremediation, Biofuels and Global Biomass Production (Vol. 2 pp.111-122). CRC Press, Boca Raton. <https://doi.org/10.1201/9780429057892>
  24. Mondal S. and **Panda D.** 2020. Nutrigenomics: An Interface of Gene-Diet-Disease Interaction [Online First], IntechOpen, DOI: 10.5772/intechopen.94602. Available from: <https://www.intechopen.com/online-first/nutrigenomics-an-interface-of-gene-diet-disease-interaction>
  25. Panda, D., Mondal, S., & Mishra, A. (2022). Liquid Biofertilizers from Seaweeds: A Critical Review. In A. Ranga Rao, & G.A. Ravishankar (Eds.), Sustainable Global Resources of Seaweeds (vol. 1, pp.485-501). Springer. [https://doi.org/10.1007/978-3-030-91955-9\\_26](https://doi.org/10.1007/978-3-030-91955-9_26)
  26. Mondal, S., Panda, D., & Bose, B. (2022). Seed biopriming with biopesticide: A key to sustainability of agriculture. In H.B. Singh, & A. Vaishnav (Eds.), New and Future Developments in Microbial Biotechnology and Bioengineering (pp. 265-288). Elsevier. <https://doi.org/10.1016/B978-0-323-85577-8.00005-6>.
  27. Panda, S., **Panda, D.**, & Mondal, S. (2021). Multidrug-resistant bacteria in wastewater. In S. Majumder, S. Balachandran, S. Santra, & B. Mondal (Eds.), Solid Waste Management, Issues, Concerns and Solution (pp. 156-160). Akshara Prakashini Publication, Bolpur.
  28. Mondal, S., **Panda, D.**, Mishra, A., Mondal, B., & Hatai, L. (2021). Morpho-physiological Consequences of Waste Water Irrigation on Crop Plants. In S. Majumder, S. Balachandran, S. Santra, & B. Mondal (Eds.), Solid Waste Management, Issues, Concerns and Solution (pp. 146-151). Akshara Prakashini Publication, Bolpur.
  29. Mondal, S., Bose, B., **Panda, D.** (2023). Effect of Nano-Priming 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. [https://doi.org/10.1007/978-981-99-1858-4\\_5](https://doi.org/10.1007/978-981-99-1858-4_5)
  30. Mondal S, Yadav KN, Vikram N, **Panda D.** 2024. Physiological and molecular basis of seed priming with nanomaterials. In Nanofertilizer Synthesis, ed. Abd-Elsalam KA. Amsterdam: Elsevier. pp. 345–58. doi: 10.1016/b978-0-443-13535-4.00028-6
  31. **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 <https://doi.org/10.1002/9783527843367.ch28>
  32. 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: 978-146-58872-76-7.
  33. Choudhury, M.M., **Panda, D.**, and Mondal, S. (2025). Nano-Priming-Mediated Drought Stress Tolerance in Rice. IntechOpen. doi: 10.5772/intechopen.1012442

### Journal Publications:

1. Pramanik, K., Bera, A. K. and **Panda, D.** 2011. Effect of Irrigation cum Integrated Nutrient Management on Relative Water Content, Chlorophyll Content and Yield Attributes of Lentil (*Lens culinaris* Medik). *Journal of Soil Biology and Ecology*. **31**(1-2): 85-93
2. **Panda, D.**, Pramanik, K. and Nayak, B. R. 2012. Use of Seaweed Extracts as Plant Growth Regulators for Sustainable Agriculture. *International Journal of Bioresource and Stress Management*. **3**(3):404-411
3. **Panda, D.**, Rajbonshi, M. and Pramanik, K. 2012. Studies on the Response of Summer Sesame (*Sesamum indicum* L.) to Moisture Stress and Agrochemicals. *Journal of Interacademia*. **17**(1):86-96
4. Sen, A., **Panda, D.**, Ghosh, D.C. and Pramanik, K. 2012. Effect of Moisture Stress and Growth Regulators on Growth and Yield of Chickpea (*Cicer arietinum* L.). *International Journal of Bioresource and Stress Management*. **3**(4):481-488
5. Pramanik, K., Bera, A.K. and **Panda, D.** 2013. Response of Different Sources of Phosphatic Fertilizers and Homobrassinolide on Total Chlorophyll Content, Yield Attributes and Yield of Hybrid Rice under Lateritic Zone of West Bengal. *International Journal of Bioresource and Stress Management*. **4**(1):014-018
6. **Panda, D.**, Ghosh, D.C. and Kar, M. 2013. Effect of Salt Stress on the Pigment Content and Yield of Different Rice (*Oryza sativa* L.) Genotypes. *International Journal of Bioresource and Stress Management*. **4**(3):431-434
7. Bera, A. K., Pramanik, K. and **Panda, D.** 2013. Response of biofertilizers and homo-brassinolide on growth, relative water content and yield of lentil (*Lens culinaris* Medik). *Journal of Crop and Weed*. **9**(2):84-90
8. Prasad, B.V.G., Chakravorty, S., Saren, B.K. and **Panda, D.** 2014. Effect of mulching on pod yield and yield attributes in French bean (*Phaseolus vulgaris* L.). *Life Sciences International Research Journal*. **1**(1): 328-330
9. Nayak, B.R., Saini, S.S., **Panda, D.**, Pramanik, K. and Swain, S. K. 2014. Effect of Farmyard Manure, Nitrogen and Plant spacings on Nitrogen Uptake, Oil and Seed yield of Coriander (*Coriandrum sativum* L.). *Journal of Interacademia*. **18**(1)49-54
10. Prasad, B.V.G., Chakravorty, S., Saren, B.K. and **Panda, D.** 2014. Effect of Mulching on Physiological Growth Determinants of Productivity in French Bean (*Phaseolus vulgaris* L.). *Hortflora Research Spectrum*. **3**(2):162-165
11. Mondal, S., **Panda, D.**, Anyatullah and Bose, B. 2014. Experimental Strategies Presenting a Holistic View Regarding Heat Stress in Plants. *International Journal of Bioresource and Stress Management*. **5**(3): 444-460
12. **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): 039-044
13. Chakravorty, S., Mandi, A. and **Panda, D.** 2015. Studies on the effect of nutrients and spacing on growth and seed yield of palak (*Beta vulgaris* var. bengalensis). *Environment and Ecology*. **33**(1B):410-415
14. **Panda, D.** 2015. Fluoride Toxicity Stress: Physiological and Biochemical Consequences on Plants. *International Journal of Bio-resource, Environment and Agricultural Sciences*. **1**(1): 70-84
15. Hatai, L. D. and **Panda, D.** 2015. Agricultural Marketing Information System– A Case Study of Traders in Meghalaya. *Economic Affairs*. **60**(2): 263-271
16. Prasad, B.V.G., Chakravorty, S., Saren, B.K. and **Panda, D.** 2015. Effect of mulching on flowering, pod yield, water use and water use efficiency of French bean (*Phaseolus vulgaris* L.). *Green Farming*. **6**(3):573-575
17. Mura, S. S., **Panda, D.**, Mukherjee, A. and Pramanik, K. 2015. Effect of Pre-sowing Treatment of Growth Regulators and Agrochemicals on Germination, Drymatter accumulation, Chlorophyll

- content and Yield of Sesame (*Sesamum indicum* L.). *International Journal of Bio-resource, Environment and Agricultural Sciences*. 1(2): 51-56
18. **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
  19. Chakravorty, S., **Panda, D.** and Mandi, A. 2016. Studies on the Response of Water Spinach to Different Levels of Nitrogen and Phosphorus. *Journal of Interacademia*. 20(1):41-48
  20. **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
  21. Behera, S., Mahapatra, A. K., Mishra, P. J., Pattanayak, S. and **Panda, D.** 2016. Performance of Bamboo based Agri-silvicultural Systems in North Odisha, India. *International Journal of Bio-resource and Stress Management*. 7(2):218-221
  22. Debata, D. K., Mohapatra, K. B., **Panda, D.** 2017. Effect of Environmental Conditions on Yield and Yield Attributing Parameters of Straw Mushroom (*Volvariella* spp.) *Environment and Ecology*. 35 (1A): 336-340
  23. Mishra, A. and **Panda, D.** 2017. Novel Plant Growth Regulators and their Potential Uses in Agriculture. *International Journal of Bio-resource and Stress Management*. 8(6):820-826
  24. **Panda, D.** 2018. Ethnobotanical study of medicinal plants in Jajpur district of Odisha, India. *Journal of Pharmacognosy and Phytochemistry*. 7(4): 1508-1512.
  25. **Panda, D.** and Ghosh, D. C. 2018. Effect of Growth Regulators on Germination and Early Seedling Growth of Salt Stressed Sensitive and Tolerant Genotypes of Rice. *International Journal of Bio-resource and Stress Management*. 9(2):274-281
  26. Mishra, S.P., Padhiary, A.K., Nandi, A., Patnaik, A. and **Panda, D.** 2018. Effect of soluble fertilizer (1% Urea) on yield of coriander Var. Super Midori. *Journal of Pharmacognosy and Phytochemistry*. 7(6): 2383-2385.
  27. Mondal, S. and **Panda, D.** (2019). Studies on the Response of Potato to Boronated Sulphur. *Plant Archives*. 19(2): 2622–2626, ISSN 2581-6063.
  28. **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
  29. **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.
  30. **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.
  31. 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.
  32. Ghosh A, Mondal S. and **Panda D.** (2020). Morpho-physiological responses of chilli (*Capsicum annum* L.) to foliar application of micronutrients and growth regulators. *International Journal of Bio-resource and Stress Management*. 11 (1) :095-102, ISSN 0976-4038.
  33. 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 Annum* L.). *Plant Cell Biotechnology and Molecular Biology*. 21 (13&14): 37-51, ISSN 0972-2025.
  34. Mondal, S., Pramanik, K., **Panda, D.**, Dutta, D., Karmakar, S. and Bose, B. (2022). Sulfur in Seeds: An Overview. *Plants*, 11(3), 450. <https://doi.org/10.3390/plants11030450>
  35. Duary, S., Pramanik, K. and **Panda, D.** (2022). Effect of irrigation and nitrogen management on water productivity and nutrient uptake of aerobic rice. *ORYZA-An International Journal of Rice*, 59(1), 106-112.

36. **Panda, D.**, Mondal, S. 2023. Effect of Growth Regulators on Growth and Quality of Strawberry cv. Sweet Sensation Grown in Pot Culture. *International Journal of Bio-resource and Stress Management*. 14(8): 1154-1167. [HTTPS://DOI.ORG/10.23910/1.2023.3578a](https://doi.org/10.23910/1.2023.3578a).
37. Padhiary, A.K., **Panda, D.**, Nayak, B.R., Mondal, S. and 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
38. 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>
39. Padhiary, A.K., Nayak, B.R., **Panda, D.**, Srichandan, S. and Kar, R.K. 2023. Effect of Varying Irrigation Regimes and Cultivars on Growth, Yield, Water Use Efficiency and Economics of Rice *Oryza sativa* under Aerobic Condition. *International Journal of Plant & Soil Science*. 35 (19):553-559.
40. **Panda, D.** 2023. Morpho-Physiological & Biochemical Basis of Regulation of Plant Growth by Polyamines: An Overview of Recent Trends. *Biological Forum – An International Journal*. 15(2): 1300-1307.
41. P.K. Panda, P.K., Samantarai, R.K., **Panda, D.** and Das, T.R. 2023. Drip irrigation technology, originated from Odisha province of India: A review. *e-planet* 21 (1): 1-9
42. Ghosh, A., **Panda, D.** and 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.
43. 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. *Asian Journal of Soil Science and Plant Nutrition* 10:238–245
44. Gopalakrishnan, V.A.K., Mondal, S., Bagariya, M., Trivedi, K., **Panda, D.** and 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*. 37: 629–643. <https://doi.org/10.1007/s10811-024-03418-4>
45. Pal, S., Pal, D., Kar, R.K., **Panda, D.**, Dey, P.C. and Dey, N. 2025. Coetaneous activity of Sub1a and SK for maintenance of underwater growth in rice genotypes. *Plant Gene* 42: 100502. <https://doi.org/10.1016/j.plgene.2025.100502>.

#### **Proceedings in Seminars/Symposiums/Conferences:**

Senapati, S.K., **Panda, D.**, Rout, P and Sahu, S.K. 2010. Impact of Climate Change and its Variability on Agriculture. In: Proceedings of the International Conference on Global Climate Change-2010 organized by Centre for Environmental Studies, Institute of Science, Visva-Bharati, Santiniketan during 19-21 February 2010. pp.72-89

#### **Participated and Presented papers in Seminars/Symposiums/Conferences**

1. Participated and presented paper in IInd National Seminar on Earthworm Ecology and Environment & IXth National Symposium on Soil Biology and Ecology organized by Soil Testing Laboratory, Palli Siksha Bhavana, Visva-Bharati, Sriniketan in collaboration with Indian Society of Soil Biology and Ecology, 21-23 November, 2009
2. Participated and presented paper entitled Effect of Growth Regulators and Micronutrients on Growth and Yield of Chilli (*Capsicum annum* L.) in the National Conference on Horticulture for Rural Development-Biotechnological and Biochemical aspects organized by Department of Chemistry, Jadavpur University, Kolkata and Eastern India Horticulture and Biotechnology Centre Baharu, South 24-Parganas, West Bengal on 25th September 2010.
3. Participated and presented paper in the National Conference of Plant Physiology on Physiological and Molecular Approach for Crop Improvement under Changing Environment jointly organized by

Department of Plant Physiology, Institute of Agricultural Sciences, Banaras Hindu University & Indian Society for Plant Physiology, New Delhi at BHU, Varanasi, Uttar Pradesh during 25- 27 November, 2010.

4. Participated and presented paper in the International Symposium on System Intensification Towards Food and Environmental Security organized by Crop and weed Science Society, Bidhan Chandra Krishi Viswavidyalaya, West Bengal, India in collaboration with NABARD, Kolkata at FTC (Lake Hall), Kalyani, BCKV, India during 24–27 February, 2011.
5. Participated and presented paper in the National Symposium on Pollution: Disbalancing the Global Environment- Threats and Prevention organized by Faculty of Science, Bolpur College, Birbhum, West Bengal in collaboration with National Institute of Technology, Durgapur and Department of Biotechnology & Environmental Science, Burdwan University at Visva-Bharati, West Bengal, India during 5 -6 March, 2011.
6. Participated and presented paper in the National Symposium on Science and Nature: Tagore’s Vision and its relevance organized by Siksha-Bhavana, Visva-Bharati at Visva-Bharati, West Bengal, India during 12 -13 March, 2011.
7. Participated with presented paper in National Seminar on Agricultural Strategies Vis-à-Vis Environment: Vision 2025 organized by Agro-Economic Research Centre, Visva-Bharati, Santiniketan at Agro-Economic Research Centre, Visva-Bharati, West Bengal during 22-23 March, 2011.
8. Participated and presented paper in the National Seminar on Application of Statistics in Life Science and Engineering organized by Department of Agricultural Extension, Agricultural Economics and Agricultural Statistics (EES), Palli Siksha Bhavan, Visva-Bharati, Sriniketan, West Bengal during 10-11 December, 2011.
9. Participated and presented paper in the National Symposium on Approaches to Maximizing Crop Productivity jointly organized by Agricultural Society of India and Institute of Agricultural Science, University of Calcutta, 35-Ballygunge Circular Road, Kolkata-700 019, West Bengal during 12- 14 January, 2012.
10. Participated and presented paper in the National Seminar on “Safe Food for All” organized by Department of ASEPAN (Agronomy, Soil Science and Agricultural Chemistry, Agricultural Engineering, Plant Physiology and Animal Science), Palli Siksha Bhavan (Institute of Agriculture), Visva-Bharati, Sriniketan, West Bengal during 21-23 February, 2012.
11. Participated and presented paper in the National Seminar on Science in Sanskrit Literature organized by Department of Sanskrit, Pali and Prakrit, Bhasa Bhavan, Visva-Bharati, Santiniketan, West Bengal during 23-25 February, 2012.
12. Participated and presented paper in the National Seminar on Advances in Agricultural Research towards Food security and Environmental Sustenance organized by Palli Siksha Bhavana, Visva-Bharati, 01-03 September, 2012.
13. Participated and presented paper in the National Symposium on Plant Microbe Interactions and Crop Health Management organized by Department of Plant Protection, Palli Siksha Bhavana in collaboration with Indian Phytopathological Society, at Visva-Bharati, West Bengal, October 6-7, 2012.
14. Participated and presented paper in the First International Conference on Bio-resource and Stress Management organized by Ratikanta Maiti Foundation at Science City, Kolkata, West Bengal, India, February 6-9, 2013

15. Participated and presented paper in National Seminar on Echoes of Silent Spring: Human Impact on Environment organized by Department of Environmental Studies, Visva-Bharati, Santiniketan on 9th March 2013.
16. Participated and presented paper in National Seminar on Recent Advances in Rice Genomics and Biotechnology jointly organized by Department of Biotechnology, Siksha Bhavana and Palli Siksha Bhavana, Visva-Bharati held at Santiniketan during 23-24 March, 2013.
17. Participated and presented paper in International Conference on Harmony with Nature in Context of Eco-technological Intervention and Climate Change (HARMONY 2013) organized by Department of Zoology, Environmental Science and Biotechnology, DDU Gorakhpur University, Gorakhpur, Uttar Pradesh during 11-13 November 2013
18. Participated and presented paper in National Conference on Frontiers in Algology and Algal Biotechnology (NCFAAB) organized by Department of Biotechnology, Siksha Bhavana, Visva-Bharati, Santiniketan during 15-17 November 2013
19. Participated and presented paper in National Seminar on Environmental Issues: Protection, Conservation and Management organized by Department of Environmental Studies, Siksha Bhavana, Visva-Bharati, Santiniketan during 22-23 November 2013
20. Participated and presented paper in National Seminar on Agriculture and Bio-Security in Changing Scenario organized by Department of ASEPAN, Palli Siksha Bhavana, Visva-Bharati, Sriniketan during 1-3 February 2014
21. Participated and presented paper in International Seminar on Integrating Agriculture & Allied Research: Prioritizing Future Potentials for Secure Livelihood (ISIAAR) organized by Crop and weed Science Society, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, West Bengal during 6-9 November, 2014
22. Participated and presented paper in National Conference of Plant Physiology-2014 on Frontiers of Plant Physiology Research: Food Security and Environmental Challenges organized by Department of Plant Physiology, OUAT, Bhubaneswar & Indian Society for Plant Physiology, New Delhi during 23-25 November 2014
23. Participated and presented paper in National Seminar on Integrated Approaches in Horticulture for Sustainable Development (IAHSD-2014) organized by Palli Siksha Bhavana, Visva-Bharati, Sriniketan during 29-30 November 2014
24. Participated and presented paper in International Conference on the theme Mother Earth: Save It to Achieve a Sustainable Future for All (ICME-2014) organized by Department of Environmental Science, University of Burdwan, Burdwan during 10-12 December 2014
25. Participated and presented paper in International Seminar on Human Development and Sustainability: Challenges and Strategies for the Asian Century organized by Department of Social Work, Visva-Bharati, Sriniketan and International Consortium for Social Development-Asia Pacific in collaboration with the Charles Sturt University, Australia and Action Aid-Kolkata during 16-18 January 2015.
26. Participated and presented paper entitled "Role of Carbon Bio-Sequestration by Plants *vis-à-vis* Terrestrial Carbon Sequestration in Mitigation of Climate Change" 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.
27. Participated and presented paper entitled "Nanotechnology for Sustainable Agriculture" in the National Seminar on Sustainable Agriculture for Food Security and Better Environment organized by

Department of Agronomy, BCKV, Mohanpur, Nadia during 17-18 December 2015.

28. Participated and presented paper entitled “Agricultural Education in an Era of Climate Change: An Indian Perspective” in the National Conference on Education and Development organized by Department of Life Long Learning and Extension (Rural Extension Centre), PSV, Visva-Bharati, Sriniketan during 4-5 March 2016.
29. Participated and presented paper entitled “Effect of growth regulators on some physiological parameters of sesame under moisture stress” 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.
30. Participated and presented paper entitled “Global warming and Carbon trading” in the VI<sup>th</sup> International Conference on Issues of Economic Development with a special focus on Indian Agriculture organized by Department of Economics and Politics, Visva-Bharati, Santiniketan during 11-12 March 2016.
31. Participated and presented paper entitled “Role of Food in Cognitive Development, Learning and Memory” in the National Seminar on Cognitive Disabilities and Effective Learning Tools-An Approach towards Educational Paradigm Shifts organized by Department of Education, Vinaya Bhavana, Visva-Bharati, Santiniketan, West Bengal held during 17-18 March 2016.
32. Participated and presented paper entitled “Ethnobotanical Study of Medicinal Plants in Jajpur District of Odisha, India” in the National Seminar on Plant & Microbe: Diversity and Utilization organized by Department of Botany, Visva-Bharati, Santiniketan during 19-20 March 2016.
33. Participated and presented paper entitled “Bio-Energy Crops in Mitigation of Climate Change “in the International Conference on Renewable Energy-Extension & Outreach organized by Department of Environmental Studies, Visva-Bharati, Santiniketan during 20-21 March 2016.
34. Participated and presented paper entitled “Food and Nutritional Security through Biofortification of Staple Food Crops” in the National Seminar on Rural Impoverishment and Agrarian Strategies organized by Department of Rural Studies, Palli Charcha Kendra, Visva-Bharati, Sriniketan during 30-31 March 2016
35. Participated and presented paper entitled “Zinc priming in Seed-a low-cost approach for health and nutritional aspects of the poor and marginalized communities” in the National Seminar on Relevance of Dr. B.R. Ambedkar for Inclusive Development in India organized by SC, ST & OBC Employees Welfare Association of Visva-Bharati, Santiniketan on 14<sup>th</sup> April 2016.
36. Participated and presented paper in the National Seminar on Relevance of Dr. B.R. Ambedkar for Inclusive Development in India organized by SC, ST & OBC Employees Welfare Association of Visva-Bharati, Santiniketan on 14<sup>th</sup> April 2016.
37. Participated and presented paper in the National Seminar on “Nutrition and Wellness” organized by Physical Education Unit, Palli Siksha Bhavana, Visva-Bharati, Sriniketan during 7-8<sup>th</sup> November 2016.
38. 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 - 20<sup>th</sup> November, 2016
39. 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 4<sup>th</sup> December, 2016.
40. Participated and presented paper entitled “Response of Chickpea to different tillage and micronutrient application under rainfed in red and lateritic soil of West Bengal” in the National Symposium on “Towards Climate Smart Agriculture-A Key to Livelihood Security” organized by Institute of Agricultural Sciences, University of Calcutta during 9-11<sup>th</sup> December, 2017.
  41. Participated and presented paper entitled “Irrigation with waste water: Heavy metal stress on crop plant” in the National Seminar on “Waste Management of Local Self Government (Municipalities and Panchayats)” organized by Palli Samgathan Vibhaga (PSV), Visva-Bharati, Sriniketan-731 236 during 16-17<sup>th</sup> March, 2018.
  42. Presented paper entitled “Avenue Trees In and Around Santiniketan: Morphological Effect of Solid Particulate Matter Deposits & Their Potential for Mitigation of Air Pollution-A Review” 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 March 2018 to 25 March 2018.
  43. Participated and presented paper entitled “Effect of Botanical Extracts.....performance of rice” in the National Seminar on “Dr. B.R. Ambedkar and Social Engineering” organized by SC, ST & OBC Employees Welfare Association of Visva-Bharati, Santiniketan during 13-14<sup>th</sup> April 2018.
  44. Participated and presented paper entitled “Bio-prospecting and Biopiracy: An Indian Perspective” in the National Seminar on “Dr. B.R. Ambedkar and Social Engineering” organized by SC, ST & OBC Employees Welfare Association of Visva-Bharati, Santiniketan during 13-14<sup>th</sup> April 2018.
  45. Participated and presented paper entitled “Nano-fertilizers in Plant Nutrition” in the International Conference on Advancement in Science & Technology organized by Indian JSPS Alumni Association in association with Department of Physics, Visva-Bharati, Santiniketan during 3<sup>rd</sup> -4<sup>th</sup> September 2018.
  46. Participated and presented paper entitled “Eco-physiological consequences of artificial light at night on plants: An overview of plants of Santiniketan” in the International Conference on “Development of Cultural Tourism in and around Santiniketan & Birbhum” organized by Public Relation Office, Visva-Bharati, with Ministry of Tourism, Govt. of India & Dept. of Tourism, Govt. of West Bengal, during 16-18 November 2018.
  47. Completed MOOC Course on Dynamics of Teaching-Learning organized by ICAR-National Academy of Agricultural Research Management, Hyderabad during 1-30, November, 2018
  48. Completed 10-day National Workshop on Research Methodology Using Statistical Tools, Techniques and Packages (SPSS & R) organized by Department of Agricultural Economics and Agricultural Statistics (ES), Institute of Agriculture, Visva-Bharati, Sriniketan-731 236, West Bengal during 15-24 February, 2019.
  49. Participated and presented paper entitled “Carbon, Water and Land Foot Prints: Indicators of Sustainable Development” in the International Conference on “Media & Communication in Sustainable Development” organized by Centre for Journalism & Mass Communication, Visva-Bharati, Santiniketan, during 11-13 February 2019.
  50. Participated and presented paper entitled “Panchagavya, Jeevamrut and Bijamrit: Promising Traditional Practices for Sustainable Crop Production” 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, Visva-Bharati,

Sriniketan, during 1-3 February 2019.

51. Participated and presented paper in the International Seminar on Ecological and Environmental Sustainability: Way forward for Livelihood Security organized by Department of Plant Pathology in collaboration with Hiranmaypur Agri-horticultural Society for Technology and Rural Development, Basanti, South 24 Parganas during 25.09.2019-26.09.2019.
52. 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
53. Participated and presented paper in the 21st National Conference on Aerobiology organized by Department of Botany, Visva-Bharati, Santiniketan during 18-20 November 2019.

**Completed/ Ongoing Projects:**

| Title of the Project  | Duration                 | Sponsor and Budget   | Role                      |
|---|--------------------------|--|---------------------------|
| Studies on the Evaluation of Boronated Sulphur in Potato, Cabbage and Cauliflower   | 2018-19<br>(Completed)   | Coromandel International Limited, Secunderabad, Telangana, India (Rs. 4,25,000/-)                              | Principal Investigator    |
| Evaluation of Bioefficacy & Phytotoxicity of seaweed extract granules (Maxilizer/ Indolizer) and seaweed extract liquid (Maxilizer/ Indolizer/Activmax) on growth & yield attributing parameters of paddy and onion | 2022-24<br>(Completed)   | Indofil Industries Ltd, Mumbai (Rs.4,60,200/-)   | Co-Principal Investigator |
| Assessment of combinatorial effect of SUB1A and SK loci in lowland indigenous rice lines for tolerance to flash flood followed by stagnation  | 2021-2024<br>(Completed) | SERB, DST, Govt. of India (Rs.42,64,832/-)   | Co-Principal Investigator |
| A mechanistic understanding of rice varieties with both SUB1A- and SK-mediated tolerance to different flood regimes   | 2024-2026<br>(Ongoing)   | DST-JSPS International Collaborative Project (India-Japan Science and Technology Cooperation) (Rs.14,58,000/-) | Co-Principal Investigator |