

SOLANKI BAL, Ph.D.

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OBJECTIVE

To pursue excellence in research and education, focusing on crop improvement and sustainable production.

ACADEMIC QUALIFICATIONS

Ph.D.(Horticulture) in Vegetable Science	Bidhan Chandra Krishi Viswavidyalaya	2023
M.Sc.(Horticulture) in Vegetable Science	Bidhan Chandra Krishi Viswavidyalaya	2019
B.Sc. (Horticulture) Hons.	Bidhan Chandra Krishi Viswavidyalaya	2017

RESEARCH ACTIVITIES

Ph.D. Research: Genetic analysis for different yield components and resistance to leaf curl (ChiLCV) and anthracnose diseases in Chilli (*Capsicum annuum* L.)

M.Sc. Research: Genetic studies for yield and quality traits in Onion (*Allium cepa* L.).

ACHIEVEMENT(s)/AWARD(s)

Received the ‘**Young Women Professional Award**’ at the 2nd International Award Ceremony for Women Researchers (Coimbatore, Tamil Nadu; 26th July 2025) for Ph.D. research on Genetic analysis of yield components and resistance to leaf curl (ChiLCV) and anthracnose diseases in chilli (*Capsicum annuum* L.)

Received the ‘**Best research paper award-2024**’ on the research paper entitled ‘*Breeding chili pepper for simultaneous improvement in leaf curl virus and anthracnose disease tolerance and commercially important traits*’ on the occasion of 2nd International Agriculture Conference on ‘Natural farming Innovations: Enhancing soil health and seed quality with AI and drones for a greener Agricultural future’ held at Hansraj College, University of Delhi from November 3-5, 2024.

Received the ‘**Young Women Teacher Award-2024**’ on the occasion of “International training cum Certificate Course on Next Generation Agriculture” organized by the Society for Advancement in Agriculture and Allied Sciences, Lucknow, Uttar Pradesh from July 01- 21, 2024.

Secured **First position** in the **oral presentation** on "*Transforming Horticulture: Implementing Precision Farming Applications*" at the National Seminar on Precision Farming for Sustainable Agriculture in April 2024.

Conferred **Young Researcher Award** in the *National Symposium on Advances in Floriculture and Urban Horticulture* held at Lake Hall, Kalyani, Nadia, West Bengal on 4- 5th January, 2018.

Awarded with **Best Oral presentation award** in the *National Symposium on Advances in Floriculture and Urban Horticulture* held at Lake Hall, Kalyani, Nadia, West Bengal on 4-5th January, 2018.

Awarded with **Second Best Oral presentation award** in the *International Conference on Agriculture and Allied Sciences: The productivity, Food Security and Ecology* held at Lake Hall, Kalyani, Nadia, West Bengal on 13-14th August, 2018.

Awarded with **Innovative Article Award** for article entitled '*Plant Growth Regulators: a boon to increase vegetable production*' in Agriculture & Food: e-Newsletter.

Qualified **National Eligibility Test (ICAR-NET-2018)** in the subject of Vegetable Science, conducted by Agricultural Scientist Recruitment Board, DARE, Ministry of Agriculture & Farmers Welfare, Government of India.

Qualified **National Eligibility Test (ICAR-NET-2019)** in the subject of Vegetable Science, conducted by Agricultural Scientist Recruitment Board, DARE, Ministry of Agriculture & Farmers Welfare, Government of India.

Qualified **National Eligibility Test (ICAR-NET-2021)** in the subject of Vegetable Science, conducted by Agricultural Scientist Recruitment Board, DARE, Ministry of Agriculture & Farmers Welfare, Government of India.

Qualified **National Eligibility Test (ICAR-NET-2023)** in the subject of Vegetable Science, conducted by Agricultural Scientist Recruitment Board, DARE, Ministry of Agriculture & Farmers Welfare, Government of India.

Qualified **written entrance examination** and has been **called for interview** for the admission to **Ph.D. program of IARI** in the subject of Vegetable Science conducted by of Indian Agricultural Research Institute, New Delhi.

Ranked **First** in Ph.D. Entrance-2019 (Vegetable Science) conducted by UBKV, Pundibari, Koochbihar, West Bengal, India.

Secured **AIR-67** in ICAR-AICE-JRF/SRF(Ph.D.)-2020 in discipline of Vegetable Science.

Secured **University Research Scholarship**, Uttar Banga Krishi Viswavidyalaya, through Ph.D. Entrance Examination-2019 (not availed)

Qualified ICAR-AIEEA-PG-2017 examination conducted by Indian Council of Agricultural Research on 11th June, 2017.

Secured **third highest** OGPA (8.33/10.00) in B.Sc. (Horticulture) Honours-2017 from Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, 741252, West Bengal.

Secured **third highest** OGPA (8.68/10.00) in M.Sc. (Horticulture) Honours in Vegetable Science-2019 from Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, 741252, West Bengal.

Secured **second highest** OGPA (8.58/10.00) in Ph.D. (Horticulture) in Vegetable Science- 2023 from Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, 741252, West Bengal.

PUBLICATIONS

Bal, S., Chattopadhyay, A., & Mandal, A. K. (2025). Enzymatic and biochemical aspects of anthracnose resistance in chili (*Capsicum annuum* L.) genotypes. *Vegetable Science*, 52(01), 161-168.[NAAS(2025)-5.54]

Sharangi, A. B., **Bal, S.**, Maji, A., Upadhyay, T. K., Saeed, M. (2025). Erratum to “Coriander (*Coriandrum sativum* L.) diversity analysis: insights from germplasm resources leading to crop improvement” [Turkish Journal of Agriculture and Forestry 48 (6) 2024 876-887]. *Turkish Journal of Agriculture and Forestry*, 49(2), 447-447. [NAAS (2025)-8.90]

Bal, S., Chattopadhyay, A. and Mandal, A.K. 2024. Identifying potential donor parents for breeding against leaf curl and anthracnose diseases in chilli. *Indian Journal of Plant Genetic Resources*, 37(2): 222-231. [NAAS- 5.27]

Bal, S., Chattopadhyay, A., Mandal, A.K. 2024. Phenotypic Variability among chilli germplasms using Shannon-Weiner Index (H'). *International Journal of Bio-resource and Stress Management*, 15(04): 01-08. [NAAS-5.40]

Aruna, T.S., Hongal, D., and **Bal, S.** (2024). Molecular Breeding for Biotic and Abiotic Stress Resistance in Vegetable Crops. *Acta Scientific Microbiology* 7(8): 04-20. [Impact Factor-1.42]

Bal, S., Mandal, A.K and Chattopadhyay, A. 2024. Breeding chili pepper for simultaneous improvement in leaf curl and anthracnose disease tolerance and commercially important traits. *International Journal of Vegetable Science*, 30 (01): 91-109. [Impact Factor- 1.354]

Bal, S. (2023). Genetic and molecular aspects encompassing male sterility in onion (*Allium cepa* L.). *Journal of Plant Biology and Crop Research*, 6(2), 1089. [Impact Factor-1.8]

Amir, A.; Sharangi, A.B.; **Bal, S.**; Upadhyay, T.K.; Khan, M.S.; Ahmad, I.; Alabdallah, N.M.; Saeed, M.; Thapa, U. 2023. Genetic Variability and Diversity in Red Onion (*Allium cepa* L.) Genotypes: Elucidating Morpho-Horticultural and Quality Perspectives. *Horticulturae*, 9,1005. [NAAS (2023)- 9.10].

Bal, S., Sharangi, A.B., Upadhyay, T.K., Aljerwan, R.F., Altayyar, A., Kahrizi, D. and Ahmad, I. (2023). Quantum leap in the light of molecular elucidation of garlic genome. *Cellular and Molecular Biology*, 69(3):.33-51. [NAAS (2023)-7.77]

Bal, S.; Sharangi, A.B.; Upadhyay, T.K., Khan, F., Pandey, P., Siddiqui, S., Saeed, M., Lee, H.J.; Yadav, D.K. (2022). Biomedical and Antioxidant Potentialities in Chilli: Perspectives and Way Forward. *Molecules*, 27: 6380. [NAAS (2022)- 10.91]

Bal, S., Maity, T.K. and Maji, A. (2022). Assessment of Genetic Variability, Heritability and Genetic Gain for Yield and Quality Traits in Onion (*Allium cepa* L.). *International Journal of Bioresource and Stress Management*, 13(7):674-682. [NAAS (2022)-5.11].

Bal, S., Maity, T.K. and Sharangi, A.B. (2021). Morphological and biochemical characterization of onion (*Allium cepa* L.) germplasm by principal component analysis. *Journal of Pharmacognosy and Phytochemistry*, 10(1): 121-124. [NAAS (2021)-5.21]

Bal, S., Maity, T.K. and Maji, A. (2020). Evaluation of onion genotypes for growth, yield and quality traits under gangetic alluvial plains of West Bengal. *International Journal of Chemical Studies*, 8(4):2157- 2162. [NAAS (2020)-5.31]

Bal, S., Maity, T.K. and Maji, A. (2020). Genetic Divergence Studies for Yield and Quality Traits in Onion (*Allium cepa* L.). *International Journal of Current Microbiology and Applied Sciences*, 9(6):3201-3208. [NAAS (2020)-5.38]

Bal, S., Maity, T.K., Sharangi, A.B. and Majumdar, A. (2019). Quality assessment in association with yield attributes contributing improved yield in onion (*Allium cepa* L.). *Journal of Crop and Weed*, 15(3):107-115. [NAAS (2019)-5.46]

Bal, S., Maity, T.K., Sharangi, A.B. and Maji, A. (2019). Screening of onion (*Allium cepa* L.) germplasm against purple blotch disease. *Journal of Pharmacognosy and Phytochemistry*, 8(6):546- 548. [NAAS (2019)- 5.21]

BOOKCHAPTERS

Bal, S., Chattopadhyay, A., & Hazra, P. (2025). Utilization of Crop Wild Relatives in Vegetable Breeding Programs Could Enhance Crop Adaptation to Challenging Environments. In *Ecologically Mediated Development: Promoting Biodiversity Conservation and Food Security* (pp. 73-99). Singapore: Springer Nature Singapore.

Bal, S., & Sharangi, A. B. (2025). Speed Breeding: A “Paradigm Shift” in Crop Improvement. In *Ecologically Mediated Development: Promoting Biodiversity Conservation and Food Security* (pp. 589-607). Singapore: Springer Nature Singapore.

Bal, S. (2025). Amelioration of Plant Biotic Stress by Mycorrhiza Helper Bacteria. In *Bio-control Agents for Sustainable Agriculture: Diversity, Mechanisms and Applications* (pp. 359-384). Singapore: Springer Nature Singapore.

Solanki Bal. 2021. *Hibiscus*. In: Bose TK, Bhatia R, Dutta K, Kumar R, Saha TN, Mukherjee D (eds). *Commercial Flowers* (Vol.5, 3rd Revised and Illustrated Edition). Daya Publishing House, New Delhi. pp. 531-565.

Solanki Bal and Swati Saha. 2021. *Rudbeckia*. In: Bose TK, Bhatia R, Dutta K, Kumar R, Saha TN (eds). *Commercial Flowers* (Vol.4, 3rd Revised and Illustrated Edition). Daya Publishing House, New Delhi. pp.567-591.

V. A. Parthasarathy, Rajiv Kumar, C. Aswath, and **Solanki Bal**. 2021. *Freesia*. In: Bose TK, Bhatia R, Dutta K, Kumar R, Saha TN (eds). Commercial Flowers (Vol.3, 3rd Revised and Illustrated Edition). Daya Publishing House, New Delhi. pp. 397-422.

C. Aswath, V. A. Parthasarathy, Rajiv Kumar, N. Roychoudhury and **Solanki Bal**. 2021. *Lilium*. In: Bose TK, Bhatia R, Dutta K, Kumar R, Saha TN (eds). Commercial Flowers (Vol.2, 3rd Revised and Illustrated Edition). Daya Publishing House, New Delhi. pp.127-188.

V.A. Parthasarathy, C. Aswath and **Solanki Bal**. 2021. *lotus*. In: Bose TK, Bhatia R, Dutta K, Kumar R, Saha TN (eds). Commercial Flowers (Vol.2, 3rd Revised and Illustrated Edition). Daya Publishing House, New Delhi. pp.13-58.

Solanki Bal and Saheb Pal. 2021. *Seed Production Technology of leafy vegetables*. In: Mishra N, Panigrahi KK, (eds). A textbook on vegetable seed production. International Books and Periodicals Supply Service, New Delhi. pp. 421-433.

Solanki Bal and Saheb Pal. 2021. *Seed Production Technology of Garlic*. In: Mishra N, Panigrahi KK, (eds). A textbook on vegetable seed production. International Books and Periodicals Supply Service, New Delhi. pp. 326-343.

Solanki Bal and Saheb Pal. 2021. *Seed Production Technology of Onion*. In: Mishra N, Panigrahi KK, (eds). A textbook on vegetable seed production. International Books and Periodicals Supply Service, New Delhi. pp.303-325.

Saheb Pal and **Solanki Bal**. 2021. *Seed Production Technology of Chilli and Capsicum*. In: Mishra N, Panigrahi KK, (eds). A textbook on vegetable seed production. International Books and Periodicals Supply Service, New Delhi. pp.87-112.

Saheb Pal and **Solanki Bal**. 2018. *Maturity indices of vegetable crops*. In: Mitra S, Banik AK, Kuchi VS and Meena NK (eds.). Trends & prospects in post-harvest management of horticultural crops. Today and Tomorrow's Printers and Publishers, New Delhi. pp. 699-728.

Saheb Pal and **Solanki Bal**. 2018. Postharvest management, processing and value addition of Okra [*Abelmoschus esculentus* (L.) Moench.]. In: Jana JC, Koley, TK, and Murmu DK (eds). Advances in postharvest management, Processing and Value Addition of Horticultural Crops: Part 2: Vegetable, Spices and Plantation Crops. Today and Tomorrow's Printers and Publishers, New Delhi. pp. 159-180.

POPULAR ARTICLES

Solanki Bal. 2022. Facets of interspecific hybridization within edible Alliums. Agricos e- Newsletter. 3(10):61-63.

Solanki Bal. 2022. Meiosis in Pollen Mother Cells (PMC) and Pollen fertility in *Allium cepa* and its crosses with *Allium fistulosum*. Agricos e-Newsletter. 3(11): 50-53.

Solanki Bal. 2022. Meiotic eccentricities in *A. cepa* × *A. ampeloprasum* spp. *porrum* and *A. cepa* × *A. sativum*. Agricos e-Newsletter. 3(12):42-45.

Solanki Bal. 2022. Breeding for Quality Improvement in Chilli: A Review. National Symposium on Ornamental and Edible Horticulture: Emerging Challenges and Sustainable Goals. Held during 21st-22nd February, 2022 at BCKV, Mohanpur, Nadia, West Bengal.

Solanki Bal and Saheb Pal. 2020. Balcony Gardening of Vegetable Crops. Agriculture & Food: e-Newsletter. 2(2): 421-423.

Solanki Bal and Saheb Pal. 2020. Double Haploidy in Vegetable Improvement. Agriculture & Food: e-Newsletter. 2(2): 452-456.

Saheb Pal and **Solanki Bal.** 2020. Induced Systemic Resistance and its importance in eco- friendly disease management in vegetable crops. 2020. Agriculture & Food: e-Newsletter. 2(2): 248-253.

Saheb Pal and **Solanki Bal.** 2020. Nested Association Mapping: A Potent Tool for Dissecting Quantitative Traits. 2020. Agriculture & Food: e-Newsletter. 2(2): 399-401.

Saheb Pal and **Solanki Bal.** 2020. Plant Growth Regulators: A boon to increase vegetable production. 2020. Agriculture & Food: e-Newsletter. 2(2): 5-7.

Saheb Pal and **Solanki Bal.** 2020. Polyploidy: a novel technique for improvement of vegetable crops. Agriculture & Food: e-Newsletter. 2(2): 219-222.

Saheb Pal and **Solanki Bal.** 2020. Tomato Leaf Curl New Delhi Virus in Cucurbitaceous Vegetables: an emerging threat in global cucurbit production. Agriculture & Food: e-Newsletter. 2(2): 338-341.

Solanki Bal. 2019. Onion Improvement in India. International Seminar on Agriskills for convergence in Research, Industry & Livelihood. Held at FACC, Lake Hall, Kalyani, Nadia, West Bengal

REVIEWER OF SCIENTIFIC JOURNALS (NATIONAL/INTERNATIONAL)

Molecular Biology Reports

Scientific Reports

Discover Plants

Discover Applied Science

South African Journal of Botany

Plant Breeding

Cogent Food and Agriculture

Journal of Scientific Research and Reports

Asian Journal of Agricultural and Horticultural Research

Molecules

Antioxidants

Frontiers in microbiology

Frontiers in plant science

Journal of advances in biology and biotechnology

LIFE MEMBER OF SCIENTIFIC SOCIETIES

Indian Society of Plant Genetic Resources

Indian Society of Vegetable Science

TEACHING EXPERIENCE

September 2023 – till date: Assistant Professor. Adamas University, Kolkata, India

February 2023-August 2023: Visiting faculty. JIS University, Block A, Phase III, Kalyani, Nadia - 741235, West Bengal, India

ADMINISTRATIVE RESPONSIBILITIES

Examination Coordinator for the School of Smart Agriculture, Adamas University, Kolkata, India (May, 2025-till date)

Member of Board of Studies (BoS) of School of Smart Agriculture at Adamas University, Kolkata, India

Member of Faculty Council (FC) of School of Smart Agriculture at Adamas University, Kolkata, India

Single Point of Contact (SPOC) for student affairs (2024-till date) and CSR (2023-till date) activities for School of Smart Agriculture, Adamas University, Kolkata, India

OTHER ACHIEVEMENTS

Actively participated and presented papers in numerous national and international conferences, seminars, symposia, webinars, faculty development programs (FDPs), workshops, and training courses in the field of horticulture and allied sciences

Awarded **Distinction** in *Folk Dance* from **Bangiya Sangeet Kala Kendra, Kolkata.**

Secured **Distinction** in *Parambhik Pariksha (Kathak)* from **Akhil Bharatiya Gandharv Mahavidyalaya, Mumbai.**

Secured **Distinction** in *Probeshikha Prothom (Kathak)* from **Akhil Bharatiya Gandharv Mahavidyalaya, Mumbai.**

Secured **Distinction** in *Probeshikha Purbo (Kathak)* from **Akhil Bharatiya Gandharv Mahavidyalaya, Mumbai.**

Awarded **Distinction** in *Parambhik Pariksha (Bharatnatyam)* from **Prachin Kala Kendra, Chandigarh.**

Secured **Distinction** in *Sangeet Bhusan (2nd Year – Vocal Classical)* from **Prachin Kala Kendra, Chandigarh.**

POSITIVE POINTS

Honest, hard- working, positive attitude, ability to work in a group and leadership quality.

DECLARATION

I hereby declare that the above given information are true to the best of my knowledge

Date:

Dr. SOLANKI BAL