

Prof. (Dr.) Surajit Mitra
Department of Post Harvest Technology



Professional Background:

Professor - BCKV(Agril. University), West Bengal, India- 2012- Continuing
Associate Professor - BCKV(Agril. University), Mohanpur, Nadia, India- 2009-2012
Reader - BCKV (Agril. University), Mohanpur, Nadia, India - 2006-2009
Senior Lecturer - BCKV (Agril. University), Mohanpur, Nadia, India - 2001-2006
Lecturer - BCKV (Agril. University), West Bengal, Nadia, India - 1997-2001

Education :

Ph. D. in Horticulture - BCKV(Agril. University), W. B., India- 1998
M. Sc. (Agriculture) in Horticulture - BCKV(Agril. University), W. B., India- 1993
B. Sc. (Agriculture) Hons. - BCKV(Agril. University), W. B., India- 1990

Professional Training:

Abroad: 4 (Four)

- i) International Training on Postharvest Technology of vegetable crops at **Kasetsart University, Bangkok, Thailand** in 2011;
- ii) International R & D course on Postharvest Technology of Horticultural Crops at **Agricultural Research Organization , Volcani, Tel Aviv, Israel** in 2013;
- iii) Global Postharvest E-learning course offered by **Postharvest Education Foundation, La Pine, Oregon, USA** in 2012-13;
- iv) International Training Course on Food Waste Management at **Wageningen University, Wageningen, Netherlands** in 2015.

National: 4 (Four)

- i) Training on Germplasm conservation, Climate Change Mitigation & E-Net Working at Central Tuber Crops Research Institute, Thiruvananthapuram, Kerala, India in 2012.
- ii) ICAR sponsored Course on tuber crops at Central Tuber Crops Research Institute, Regional Centre, Bhubaneswar, Odisha, India in 2009;
- iii) ICAR sponsored course on production and postharvest management of fruit crops at BCKV, Kalyani, Nadia, West Bengal, India in 2005; and
- iv) UGC sponsored course on Environmental Science at University of Kalyani, west Bengal, India in 2004.

Book: 1 (One)

“Postharvest Management of Tropical Tuber Crops (2013)” published by AICRP on Tuber Crops, Directorate of Research, BCKV (State Agril. University), Kalyani, W. B.

Proceedings-1 (One)

Editor of Post Harvest Chapter in Proceedings of the International Symposium on Minor Fruits and Medicinal Plants for Health and Ecological Security (2011).

Book Chapter: 5 (Five)

- I. In Book: *Tuber Crops Recipes of India* edited by George *et al.* (2017). Tuber Crops Recipes of West Bengal, pp. 129-135.**
- II. In Book: *Tuber crops of India* edited by George *et al.* (In Press). Tuber Crops of West Bengal.**
- III. In Book: *Status papers and extended Summary* edited by Palaniswami *et al.* (2008). Present status and future scope of elephant foot yam cultivation in West Bengal, pp. 25-29.**
- IV. In Book: *Status papers and extended Summary* edited by Palaniswami *et al.* (2008). Pre and postharvest diseases of elephant foot yam and its management: The West Bengal experience, pp. 167-170.**
- V. In Book: *Tropical Fruits* edited by Bandyopadhyay *et al.* (2011). Plant morphology and yield characters of local types of acid lime, pp. 35-39.**

Editorial Board Member:

- i) International Journal of Nutritional Science and Food Technology (IJNF).**
- ii) International Journal of Forestry and Horticulture.**

iii) Permanent Honorary Board Member of Society for advancement of Human and Nature, Dr. YS Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh, India.

iv) Invited editor for special issues on postharvest technology in some Open Access Journals.

v) Reviewer of several reputed journals.

Lead Lecture/Invited Lecture: 2 (Two)

i) Lead Lecture on “Tropical tubers as alternate staple crops for food and nutrition security” in the International Seminar on ‘Agriculture and Food for Inclusive Growth and Development during 14-15 January, 2017 at Lucknow, U.P., India.

ii) Invited Lecture in the workshop on Strengthening Impact Assessment in the CGIAR (SIAC) – Sweet potato organised by International Potato Center (CIP), Peru in Jameson Inn Shiraz, Kolkata on April 10, 2016.

Research Interest and area of specialization:

i) Nutritional facts, postharvest quality maintenance, handling and storage of horticultural crops in general and tropical tuber crops including sweet potato in particular.

ii) Pre- and post-harvest evaluation and characterization of indigenous germplasms of different horticultural crops including tropical tuber crops to identify promising types having higher productivity, better nutritional quality and longer storability.

iii) Reducing food waste and enhancing food security.

Number of Scholars supervised:

M. Sc. (Hort.) in Post Harvest Technology- 7;

Ph. D. in Post Harvest Technology - 4.

Seminar/Workshop organized: 1(One)

Workshop of ICAR-AICRP on Tuber Crops at FACC, BCKV, Kalyani, West Bengal during May 24-26, 2016.

Variety Release: Four

Sweet potato-Two (Bidhan Jagannath; Kamala Sundari);

Kamala Sundari, as an orange-fleshed sweet potato having high beta-carotene, a precursor of vitamin A has considerable potential to contribute to tackle the problem of vitamin A deficiency which is a major public health concern of the poorer sections. There is a great possibility of this crop for being adopted as regular diet of the consumer food chain and moreover to supplement as an alternative staple food source for the resource poor farmers in the era of extensive population growth and nutrition crisis.

Taro -One (JS-17)- High yielder and blight tolerant.

Swamp taro - One (Bidhan Latika)- High yielding and non-irritant type.

Project handled: 3 (Three)

Awards/Recognitions:

- 1. Eminent Scientist Award-2016** from Samagra Vikas Welfare Society, Lucknow, Uttar Pradesh, India.
- 2. Achiever Award-2015** from the Society for advancement of Human and Nature, Dr. YS Parmar University of Horticulture and Forestry, Solan, Himachal Pradesh, India.
- 3. Outstanding Scientist Award-2015** from Venus International Foundation, Chennai, Tamil Nadu, India.
- 4. Best AICRP Centre Award- 2013** from Indian Council of Agricultural Research, New Delhi for outstanding performance **as a Scientist in All India Coordinated Research Project on Tuber Crops.**
- 5. Chaudhary Debi Lal Outstanding AICRP Award-2007** from Indian Council of Agricultural Research, Govt. of India **as a Team Member of AICRP on Tuber Crops;**
- 6. Best Poster-Paper Award** in the International Conference on Landscaping and Urban Horticulture **organized by International Society of Horticultural Science** for a **collaborative research work with colleagues in Venezuela** in 2012.

Seminars/Symposia attended and presented Paper: 40 (Forty)

I. International: 22 (Twenty Two)

A. Abroad: 4 (Four)

- 1. International Conference** on Agriculture, Animal Science, Aquaculture & Fisheries organized by **International Center for Research & Development (ICRD)** at **Colombo, Sri Lanka** from 28-29 December, 2016.

2. International Conference on Agriculture & Animal Sciences organized by **Sri Lanka Foundation Institute (SLFI) at Colombo, Sri Lanka** from July 8-9, 2013.

3. International Conference on “Seed quality and food security” organized by **Bangladesh Agricultural University at Mymensing, Bangladesh** from February 17-19, 2009.

4. International Conference on “Postharvest Unlimited 2008” organized by **International Society for Horticultural Science at Humboldt University, Berlin, Germany** during November 04-07, 2008.

B. Home Country: 18 (Eighteen)

1. International Seminar on “Agriculture and Food for Inclusive Growth and Development” held at **National Botanical Research Institute, CSRI, Lucknow, Uttar Pradesh** from January 14-15, 2017.

2. International Symposium on “Eco -Efficiency in Agriculture & Allied Research” held at **BCKV, Kalyani, West Bengal** from January 20-23, 2017.

3. International Conference on “Agriculture, Food Science, Natural Resource Management and Environmental Dynamics: The Technology, People and Sustainable Development” at **BCKV, Kalyani, West Bengal** from 13th -14th August, 2016.

4. International Conference on “Agriculture and Horticulture Sciences” held at New Delhi from June 6-7, 2015.

5. International Seminar on “Integrating Agriculture and Allied Research: Prioritizing Future Potentials for Secure Livelihoods” at **BCKV, Kalyani, West Bengal** from November 6-9, 2014.

6. International Conference on “India Biodiversity Meet-2014” held at **Indian Statistical Institute, Kolkata** from November 21-23, 2014.

7. International Conference on “Landscape and Urban Horticulture” held at **Science City, Kolkata, West Bengal** from September 12-14, 2013.

8. International Symposium on “Food Security Dilemma: Plant Health and Climate Change Issues” held at **BCKV, Kalyani, West Bengal** from December 7-9, 2012.

9. Global Conference on “Plant Pathology for food security” held at **MPAU, Udaipur, Rajasthan** from January, 10-13, 2012.

10. International Symposium on “Minor Fruits and Medicinal Plants for Health and Ecological Security” held at **BCKV, Kalyani, West Bengal** from December 19-22, 2011.

11. Global Conference on “Augmenting Production and Utilization of Mango: Biotic and Abiotic Stresses” held at **ICAR-Central Institute for Subtropical Horticulture, Lucknow, Uttar Pradesh** from 21- 24 June, 2011.

12. International Symposium on “System Intensification towards Food & Environmental Security” held at **BCKV, Kalyani, West Bengal** from February 24-27, 2011.

13. International Conference on “Horticulture” held at **PNASF and UAS, Bangalore, Karnataka** from November 9-12, 2009.

14. International Symposium on “Management of Coastal Ecosystem: Technological Advancement and Livelihood Security” held at **Science City, Kolkata, West Bengal** From October 27-30, 2007.

15. International Conference on “Biodiversity: Issues and Concerns” held at Indian Statistical Institute, Kolkata from November 21-23, 2007.

16. International Symposium on “Mycology” held at University of Calcutta from February 23-25, 2006.

17. International Conference on “Indigenous Vegetables and Legumes” held at ICRISAT, Hyderabad, Andhra Pradesh from December 12-15, 2006.

18. International Conference on “Environment and Development” held at Science City, Kolkata from February 4-8, 2004.

II. National: 18 (Eighteen)

1. National Conference on "Tropical Tuber Crops for the Sustenance and Welfare of Tribal Communities" organized jointly by Indian Society for Root Crops and Central Tuber Crops Research Institute at **ICAR-CTCRI, Thiruvananthapuram, Kerala** from **20-22 October 2016**.

2. National Seminar on “Sustainable Agriculture and Food Security” held at **M. S. Swaminathan School of Agriculture, Centurion University of Technology and Management, Paralakhemundi Gajapati, Odisha** from 17-19 August, 2015.

3. National Seminar on “Tuber Crops” held at **Assam Agricultural University, Jorhat, Assam** on April 29, 2013.

4. 100th Indian Science Congress held at **Calcutta University, Kolkata, West Bengal** from January 3-7, 2013.

5. National Seminar on “Advances in Agricultural Research towards Food Security and Environmental Sustenance” held at **Palli Siksha Bhavana, Visva-Bharati, Sriniketan, West Bengal** from September 1-3, 2012.

6. Indian Horticulture Congress-2010 held at **Indian Agricultural Research Institute, New Delhi** from November 18-21, 2010.

7. National Symposium on “Recent Outlook on Sustainable Agriculture, Livelihood Security and Ecology of Coastal Region” held at **Coastal Agricultural Research Centre, Panaji, Goa** from October 27-30, 2010.

8. National Conference on “Horticulture for Rural Development- Biotechnological and Biochemical Aspects” held at **Jadavpur University, Kolkata, West Bengal** on September 25, 2010.

9. National Symposium on “Floriculture Scenario in the changing Global Perspective” held at **BCKV, Kalyani, West Bengal** from April 16-18, 2010.

10. National Symposium on “Agriculture in the Paradigm of Intergenerational Equity” held at **BCKV, Kalyani, West Bengal** from May 22-23, 2009.

11. National Seminar on “*Amorphophallus* : Innovative Technologies” held at **Rajendra Agricultural University, Patna, Bihar** from July 19-20, 2008.

12. National Symposium on “Present Status of Scientific Technological Interventions on the Development of Medicinal and Aromatic Plants in India” held at **BCKV, Kalyani, West Bengal** from April 26-28, 2007.

13. National Seminar on “Integrated Production and Post Harvest Management of Tropical Fruits held at **BCKV, Kalyani, West Bengal** from April 11-12, 2006.

14. National Symposium on “Production, Utilization and Export of Underutilized Fruits with commercial Potentialities” held at **BCKV, Kalyani, West Bengal** from November 22-24, 2006.

15. National Symposium on Sustainable Production and Export of Horticultural Crops held at **BCKV, Kalyani, West Bengal** from December 2-4, 2005.

16. National Seminar on “Recent Advances in Production and Post harvest Technology of Litchi for Export” held at **BCKV, Kalyani, West Bengal** from June 24 – 26, 2004.

17. National Seminar on “Banana Industry – Present Scenario and Future strategies” held at **BCKV, Kalyani, West Bengal** from June 11-13, 2004.

18. National Conference on “Application of Identified Chemicals and Biological Technological in Agriculture” held at **Jadavpur University, Kolkata, West Bengal** from March 14-15, 2003.

Papers published: 39 (Thirty nine)

- Veljović, Sonja P., Boonsiri, K., Maina, Michael K., Semavor, Emmanuel M. and **Mitra, Surajit** (2017). Infection capacity of the pathogens *Penicillium italicum* and *P. expansum* in orange during storage. *Food and Feed Research* (Serbia), **44** (1), 31-38.
- Singh, A. K. , Chaurasiya, A. K. and **Mitra, Surajit** (2017). Quality attributes of Bael (*Aegle marmelos* Corr.) preserve and candy. *International Food Research Journal* (Malaysia), **24** (1): 298-303.
- Mitra, S.** and Tarafdar, J. (2016). Postharvest loss reduction in tropical tuber crops for enhanced food and nutrition security. *Journal of Agricultural Engineering and Food Technology*, **3** (3): 210-2014.
- Singh, A. K. , Chaurasiya, A. K. and **Mitra, Surajit** (2016). Assessment of nutritional composition in elephant foot yam (*Amorphophallus paeoniifolius* Dennst- Nicolson) cultivars. *International Journal of Food Studies* (Portugal), **5** (2): 146–157.
- Byju, G., Nedunchezhiyan, M., George, James., Sunitha, S., Kamalkumaran, R., Singh, P., Mamatha, K., **Mitra, Surajit.**, Tarafdar, J. Desai, K., Ravi, V., Vani, M., Soman, Sabitha and Remya Reshmi, K. R. (2016). Fertilizer based management practices by SSNM and customized fertilizers for elephant foot yam (*Amorphophallus paeoniifolius*) cultivation in India. *Indian Journal of Agricultural Sciences*, **86** (4): 485–493.
- Singh, A. K. , Chaurasiya, A. K. and **Mitra, Surajit** (2016). Aroids for ensuring livelihood security in India-a review. *European Journal of Biomedical and Pharmaceutical Sciences*, **3**(4), 459-463.
- Mitra, S.**, Chakraborty, K., Bandyopadhyay, M. and Paul, A.K. (2015). Clustering technique in minor taxa of mango in West Bengal. *Acta Hort.* **1066**: 19-25.
- Mitra, S.** and Tarafdar, J. (2015). Diversity in morpho-biometrical characters, nutritional facts and isozymes activity of Indian landraces of upland taro (*Colocasia esculenta* var. *antiquorum* L. Scott). *Int. J. Tropic. Agric.*, **33** (2): 1135-1142.
- Ramírez-Guerrero, H.O., Bracho-Lugo Javier A., Meza-Figueroa Carlos A., García-Rojas Francisco R., and **Mitra, S.** (2015). “Aurora Tropical”: Strengthening the Production of Vegetable Seedlings as a Key Strategy in Rural and Urban Horticulture. *Int. J. Tropic. Agric.*, **33** (2): 1157-1161.
- Mandal, R., Mandal, N., **Mitra, S.**, Mukherjee, A. and Tarafdar, J. (2015). Development of DUS standard for taro (*Colocasia esculenta* var. *antiquorum* L. Scott) using digital morphometrics. *Applied Biological Research*, **17** (1): 70-76.
- Singh, A. K., Chaurasiya, A. K. and **Mitra, S.** (2015). Role of Horticulture in Agriculture Development and Food Security in India. *Proceeding of National Seminar on “Sustainable Agriculture and Food Security”*. M. S. Swaminathan School of

Agriculture, Centurion University of Technology and Management, Paralakhemundi Gajapati, Odisha, India, pp. 49-59.

- Mitra, S.** (2013). Morphological and nutritional diversity of Indian swamp taro (*Colocasia esculenta* var. *stolonifera* L. Scott). *Tropical Agriculture (Trinidad)*, **90** (1):23-29.
- Mitra, S.** (2012). Nutritional Status of Orange-Fleshed Sweet Potatoes in Alleviating Vitamin A Malnutrition through a Food-Based Approach. *Journal of Nutrition & Food Sciences (USA)*, **2**(8): 1000160 (open access).
- Roy, S., Banerjee, A., Tarafdar, J. and **Mitra, S.** (2012). Tuber quality assessment of orange-fleshed sweet potato (*Ipomoea batatas*) cultivars and their genetic relatedness as revealed by SDS-PAGE of tuber proteins. *Indian Journal of Agricultural Sciences* **82** (6): 482–488.
- Mitra, S.** and Tarafdar, J. (2011). Nutritional facts and value added products of yams (*Dioscorea* spp.). *Proceedings of the International Symposium on Minor Fruits and Medicinal Plants for Health and Ecological Security*. Faculty of Horticulture, BCKV, Kalyani, West Bengal, pp. 340-343.
- Mitra, S.**, Tarafdar, J. and Palaniswami, M. S. (2010). Impacts of different maturity stages and storage on nutritional changes in raw and cooked tubers of orange-fleshed sweet potato (*Ipomoea batatas* L. Lam) cultivars. *Acta Hort.*(Belgium), **858**: 205-212.
- Mitra, S.** (2009). Tropical tuber crops in food and nutritional security for future generations. *Proceedings of International Conference on “Seed quality and food security”* Bangladesh Agricultural University, Mymensing, Bangladesh, pp. 167-171.
- Mitra, S.**, Tarafdar, J. and Palaniswami, M. S. (2009). Nutritional status of tropical tuber crops in improving diet quality and health security of poor people. *Proceedings of International Conference on horticulture*. PNASF and UAS, Bangalore, Karnataka, pp. 219-221.
- Mitra, S.**; Pal, H. and Mazumdar, D. (2008). Physico- chemical studies of some mango varieties grown in West Bengal. *Crop Research*, **35**(3) : 233-236.
- Mitra, S.** and Tarafdar, J. (2008). Present status and future scope of elephant foot yam cultivation in West Bengal. *Proceedings of National Seminar on Amorphophallus : innovative technologies*, RAU, Patna, Bihar, pp. 25-29.
- Tarafdar, J. and **Mitra, S.** (2008). Pre and post harvest diseases of elephant foot yam (*Amorphophallus paeoniifolius*) and its management: The West Bengal experience. *Proceedings of National Seminar on Amorphophallus : innovative technologies*, RAU, Patna, Bihar, pp.167-170.

- Mitra, S.** ; Sinha, B. ; Pal, H. and Tarafdar, J. (2007). Comparative studies on morphological characters, yield, nutritional status and isozymes activity of taro (*Colocasia esculenta* var. antiquorum **L. Schott.**) grown in West Bengal. *Acta Hort.* **752** : 219-224.
- Mitra, S.** ; Mandal, K. K. ; Kundu, S. and Ghosh, S. K. (2006). Quality evaluation of sapota (*Achras zapota* **L.**) fruits grown in terai region of West Bengal. *The Horticultural Journal*, **19** (3) : 358-359.
- Tarai, R.K.; Kundu, S.; Ghosh, B. and **Mitra, S.** (2006). Performance of some minor fruits in west Bengal. *Proceedings of National Symposium on “Production , Utilization and export of Underutilized Fruits with commercial Potentialities”*. B.C.K.V, FTC, Kalyani, West Bengal, pp. 79-82.
- Ghosh, D.K.; **Mitra. S.** and Pal, H. (2006). Quality evaluation and storage behaviour of some local types of jamun (*Syzygium cumini* Skeels) fruits. *Proceedings of National Symposium on “Production , Utilization and export of Underutilized Fruits with commercial Potentialities”*. B.C.K.V, FTC, Kalyani, West Bengal, pp.66-70.
- Chakrabarty (Das), S.; **Mitra, S.**; Dhua, R.S. and Biswas, B. (2005). Influence of Pulsing, Wrapping and Storage on Vase Life of Gladiolus cv.Little Prince. *The Orissa Journal of Horticulture*, **33** (1) : 58-60.
- Ghosh, D. K. and **Mitra, S.** (2004) Post harvest studies on some local genotypes of ber (*Z. mauritiana* Lamk.) grown in West Bengal. *Indian Journal of Horticulture*, **61**(3): 211-214.
- Mitra, S.** and Mondal, K.K. (2004). Post Harvest quality assessment of some local strains of Banana fruit grown in Terai region of West Bengal. *Proceedings of National Seminar on “Banana Industry – Present Scenario and Future strategies.”* B.C.K.V, FTC, Kalyani, West Bengal, PP.52-56.
- Mitra, S.** (2004). Effect of some Pre- and Post- harvest treatments on storage behaviour of litchi (*Litchi chinensis* Sonn.) fruit cv. Bombai. *Proc. National Seminar on Recent Advances in Production and Post harvest Technology of Litchi for Export.* B,C.K.V., Kalyani, West Bengal, PP. 87 – 90.
- Ghosh, D.K. and **Mitra, S.**(2004). Studies on storage behaviour of bael (*Aegle marmelos* Correa) fruit grown in West Bengal. *J. Interacad.*, **8** (3) : 344 – 348.
- Mitra, S.**; Kundu, S. and Mitra, S.K.(2001). Evaluation of local strains of mango (*Mangifera indica*) grown in West Bengal. *Indian Journal of Agricultural Sciences*, **71**(7):466-468.
- Mitra, S.** and Mitra, S. K. (2001). Studies on physico-chemical characteristics of nineteen mango varieties grown in West Bengal. *Indian Agric.*, **45** (3&4):215-219.

- Mitra, S.** and Kar, N.(2001). Organoleptic rating and physiological loss in weight during storage of litchi fruits cv. Bombai. *Environment and Ecology*. **19** (1):239-240.
- Das, B.; Yadav, V.B. and **Mitra, S.** (2001). Standardization of dose and time of nitrogen fertilizers in litchi (*Litchi chinensis* Sonn) cv. Bombai. *Environment & ecology*, **19**(3): 516-518.
- Mitra, S.** and Mitra, S.K.(2000). Morphological and physico-chemical studies of some less known mango (*Mangifera indica* L.) varieties of West Bengal. *The Hort.J.*, **13**(1):99-104.
- Mitra, S.;** Kundu, S. and Mitra, S.K.(2000). Studies on physical characteristics and chemical composition of some mango varieties grown in West Bengal. *J. Interacad.*, **4**(4):498-501.
- Rafiqzaman, Md; **Mitra. S.** and Chattopadhyay, A. (1999). Varietal susceptibility to the mango leaf cutting weevil, *Eugnamptus marginellus* FST. (Coleoptera: Curculionidae). *The Hort. J.*, **12**(2):91-95.
- Kundu, S.; **Mitra, S.** and Mitra, S.K. (1998). Fruit growth and maturity of five guava cultivars. *The Hort. J.*, **11**(1):91-96.
- Kundu, S.; **Mitra, S.** and Mitra, S.K. (1997). Foliar application of nitrogen, phosphorus and potassium on the leaf nutrient composition of guava cv. L-49. *Indian Agric.*, **41**(4):273-276.
- Kundu, S. and **Mitra, S.** (1997). Physiological studies during the growth and development of mango (*Mangifera indica* L.) fruits. *Environment and Ecology.*, **15**(2):325-328.

Life Member of the Societies:

The Horticultural Society of India, IARI, New Delhi; **Indian Science Congress Association**, Kolkata; **Society for the Advancement of Horticulture**, BCKV; **Indian Society for Root Crops**, CTCRI, Thiruvananthapuram; **Crop and Weed Science Society**, BCKV and **Society for Advancement of Human and Nature (SADHNA)**., Solan, Himachal Pradesh.