

# CURRICULUM VITAE OF DR. KALYAN BARMAN



## PERSONAL INFORMATION

Name : Dr. Kalyan Barman  
Designation : Assistant Professor  
Date of birth : April 30, 1983  
Department : Department of Horticulture  
University : Banaras Hindu University, Varanasi  
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## ACADEMIC QUALIFICATIONS

Degree	University/Institute	Year	Subject
B.Sc.	Uttar Banga Krishi Viswavidyalaya, Cooch Behar, West Bengal	2007	Horticulture
M.Sc.	Indian Agricultural Research Institute, New Delhi	2009	Postharvest technology of horticultural crops
Ph.D.	Indian Agricultural Research Institute, New Delhi	2012	Postharvest technology of horticultural crops

## EMPLOYMENT HISTORY

Designation	Organization	Scale of pay with basic	Period	
			From	To
Assistant Professor	Banaras Hindu University, Varanasi	Rs. 15600 – 39100/- with AGP Rs. 6000/-	12 April 2016	Till date
Assistant Professor-cum-Junior Scientist	Bihar Agricultural University, Sabour, Bihar	Rs. 15600 – 39100/- with AGP Rs. 6000/-	9 October 2012	11 April 2016
Assistant Professor	University of Horticultural Sciences, Bagalkot, Karnataka	Rs. 15600 – 39100/- with AGP Rs. 6000/-	14 March 2012	3 October 2012

## PUBLICATIONS

### Research Papers in Peer Reviewed Journals: (Total Citations – 173, h index – 7)

1. **Barman, K.**, Asrey, R. and Pal, R.K. (2011). Putrescine and carnauba wax pretreatments alleviate chilling injury, enhance shelf life and preserve pomegranate fruit quality during cold storage. *Scientia Horticulturae*, 130(4): 795-800. (NAAS Score: 7.54)
2. Asrey, R., Patel, V.B., **Barman, K.** and Pal, R.K. (2013). Pruning affects fruit yield and postharvest quality in mango (*Mangifera indica* L.) cv. Amrapali. *Fruits*, 68(5): 367-381. (NAAS Score: 7.01)

3. Patel, V.B., **Barman, K.**, Chand, G. and Singh, S.K. (2013). Stem-end blackening: A new physiological disorder in mango from Bihar. *Indian Journal of Horticulture*, 70(3): 435-436. (NAAS Score: 6.13)
4. **Barman, K.**, Siddiqui, M.W., Patel, V.B. and Prasad, M. (2014). Nitric oxide reduces pericarp browning and preserves bioactive antioxidants in litchi. *Scientia Horticulturae*, 171: 71-77. (NAAS Score: 7.54)
5. **Barman, K.**, Asrey, R., Pal, R.K., Kaur, C. and Jha, S.K. (2014). Influence of putrescine and carnauba wax on functional and sensory quality of pomegranate (*Punica granatum* L.) fruits during storage. *Journal of Food Science and Technology*, 51(1): 111-117. (NAAS Score: 7.24)
6. **Barman, K.**, Asrey, R., Pal, R.K., Jha, S.K. and Bhatia, K. (2014). Post-harvest nitric oxide treatment reduces chilling injury and enhances the shelf-life of mango (*Mangifera indica* L.) fruit during low-temperature storage. *Journal of Horticultural Science and Biotechnology*, 89(3): 253-260. (NAAS Score: 6.46)
7. Siddiqui, M.W., Longkumer, M., Ahmad, M.S., **Barman, K.**, Thakur, P.K. and Kabir, J. (2014). Postharvest biology and technology of sapota – A concise review. *Acta Physiologiae Plantarum*, DOI 10.1007/s11738-014-1696-4. (NAAS Score: 7.56)
8. **Barman, K.** and Asrey, R. (2014). Salicylic acid pre-treatment alleviates chilling injury, preserves bioactive compounds and enhances shelf life of mango fruit during cold storage. *Journal of Scientific and Industrial Research*, 73: 713-718. (NAAS Score: 6.39)
9. Kumari, P., **Barman, K.**, Patel, V.B., Siddiqui, M.W. and Kole, B. (2015). Reducing postharvest pericarp browning and preserving health promoting compounds of litchi fruit by combination treatment of salicylic acid and chitosan. *Scientia Horticulturae*, 197: 555–563. (NAAS Score: 7.54)
10. **Barman, K.**, Asrey, R., Pal, R.K., Jha, S.K. and Sharma, S. (2015). Influence of different desapping agents on the incidence of sapburn, ripening behaviour and quality of mango. *Journal of Food Science and Technology*, 52(1): 161–170. (NAAS Score: 7.24)
11. **Barman, K.**, Patel, V.B., Singh, R.R., Prasad, M. and Kumari, P. (2015). Effect of harvesting time and desapping on sapburn and quality in mango (*Mangifera indica*) cv. Langra. *Indian Journal of Agricultural Sciences*, 85(7): 945–949. (NAAS Score: 6.17)
12. Siddiqui, M.W., Singh, J.P., Nayyer M.A., **Barman, K.**, Ahmad M.S., Kumar, V. (2015). 6-Benzylaminopurine affects lipid peroxidation and membrane permeability and thereby preserves curd quality and antioxidants during storage of cauliflower. *Acta Physiologiae Plantarum*, DOI 10.1007/s11738-015-1848-1. (NAAS Score: 7.56)
13. **Barman, K.**, Sharma, S., Patel, V.B. and Asrey, R. (2016). Harnessing nitrous oxide in postharvest management of fresh horticultural produce. *Indian Journal of Agricultural Sciences*, 86(4): 435-440. (NAAS Score: 6.17)
14. Nath, V., Sharma, S. and **Barman, K.** (2016). Acute Encephalitis Syndrome and its alleged litchi (*Litchi chinensis*) connection—A review and status. *Indian Journal of Agricultural Sciences*, 86(3): 283–290. (NAAS Score: 6.17)
15. Singh, A.K., Maurya, K.C., Sisodia, A., **Barman, K.** and Padhi, M. (2016). Effect of farmyard manure, vermicompost and Trichoderma on plant growth and postharvest life of gladiolus. *Journal of Ornamental Horticulture*, 19(3&4): 1-5.
16. Singh, A.K., Asmita, Sisodia, A., Pal, A.K. and **Barman, K.** (2016). Effect of sucrose and aluminium

- sulphate on postharvest life in liliium cv. Monarch. *Journal of Hill Agriculture*, 7(2): 204-208. (NAAS Score: 4.94)
17. **Barman, K.**, Patel, V.B., Sharma, S. and Singh, R.R. (2017). Effect of chitosan coating on postharvest diseases and fruit quality of mango (*Mangifera indica*). *Indian Journal of Agricultural Sciences*. 87(5): 618–623. (NAAS Score: 6.17)
  18. **Barman, K.**, Asrey, R., Singh, D., Patel, V.B. and Sharma, S. Effect of *Pseudomonas fluorescens* formulations on decay and quality of mango (*Mangifera indica*) fruits during storage. *Indian Journal of Agricultural Sciences*, 87(9): 1214-1218. (NAAS Score: 6.17)
  19. Kumari, P., **Barman, K.**, Prasad, M. and Sharma, S. (2017). Variability of physico-chemical attributes among different litchi cultivars grown in India. *Trends in Biosciences*, 10(1): 224-226. (NAAS Score: 3.94)
  20. Tiwari, D.K., Patel, V.B., **Barman, K.** and Pandey, A.K. (2017). Changes in soil CO<sub>2</sub> efflux rate at different growth stages in *Baramasi*, regular and biennial bearing mango. *International Journal of Chemical Studies*, 5(5): 1206-1209. (NAAS Score: 5.31)
  21. Raj, A., Patel, V.B., Kumar, R., **Barman, K.**, Verma, R.B., Sashikant and Pathak, S.K. (2017). Effect of high density planting systems on physiological and biochemical status of rejuvenated mango plants of cv. Amrapali. *Indian Journal of Horticulture*, 74(3): 351-356. (NAAS Score: 6.13)
  22. Rani, R., **Barman, K.**, Singh, R.R. and Ray, P.K. Effect of precooling and low temperature storage on postharvest life of litchi fruits. *Acta Horticulturae*. (Accepted).
  23. Asrey, R., Sasikala, C., **Barman, K.** and Koley, T.K. (2008). Advances in postharvest treatments of fruits- A review. *Annals of Horticulture*, 1(1): 1-10. (NAAS Score: 3.42)

### Popular articles:

1. Asrey, R., **Barman, K.** and Kumar, A. (2008). Enjoying quality pomegranates for a longer period. *Indian Horticulture*, 53(4): 30-31.
2. **Barman, K.**, Asrey, R. and Pal, R.K. (2011). Overcoming sapburn injury in mango. *Indian Horticulture*, 56(4): 14-16.
3. **Barman, K.**, Sethi, S. and Jalgaonkar, K.R. (2011). Health drinks. *Processed Food Industry*, 14(11): 19-23.
4. Koley, T.K., **Barman, K.**, Koley, T. and Asrey, R. (2011). Nutraceutical properties of Jamun (*Syzygium cumini* L.) and its processed products. *Indian Food Industry*, 30(4): 34-37.
5. **Barman, K.**, Koley, T.K., Sharma, S. and Patel, V.B. (2013). Pomegranate (*Punica granatum* L.): Nutraceutical compounds and medicinal properties. *Indian Food Industry*, 32(2): 17-21.
6. **Barman, K.**, Patel, V.B. and Sharma, S. (2014). Reaping pericarp browning-free litchi. *Indian Horticulture*, 59(3): 26-27, 37.
7. Tiwari, D.K., Singh, D., **Barman, K.** and Patel, V.B. (2014). Bioactive compounds and processed products of phalsa (*Grewia subinaequalis* L.) fruit. *Popular Kheti*, 2(4): 181-188.
8. **Barman, K.**, Sharma, S. and Patel, V.B. (2015). Golden Berry: A Treasure Trove of Health. *Processed Food Industry*, 18(3): 20-24.
9. Patel, V.B., **Barman, K.**, Singh, R.R. and Jaiswal, U.S. (2015). *Suska khetron mein bael utpadan takniki*. *Krishak Sandesh*, 2: 33-36.
10. Patel, V.B., Kumar, R., **Barman, K.** and Raj, A. (2015). *Aam ki saghan bagwani, poudh ropan pranali*

*saha ucch ghanatwa poudh ropan. Kishan Samachar, July-September issue.*

11. Kumai, P., **Barman, K.**, Sharma, S. and Nath, V. *Tudai uprant litchi ka bhura hona – karan avum nibaran, Adunik Kisan.* (Accepted).
12. Saurabh, V., Kumari, S., Pal, M. and **Barman, K.** *Aam ke phalon ko rasjalan se kaise bachaye? Raj Bhasha Patrika Lichima.* (Accepted).
13. Sharma, S., Nath, V., **Barman, K.**, Singh, S.K. and Pongener, A. *Litchi ek, fayde anek.* Udyan Rashmi. (Accepted).

### **Book chapters:**

1. Asrey, R. and **Barman, K.** (2011). Effect of preharvest factors on postharvest quality of fruit, In: Vázquez, M. (Ed.), *Advances in Post-Harvest Treatments and Fruit Quality and Safety.* Nova Science Publishers Inc., New York, pp. 191-206. ISBN 978-1-61122-973-8.
2. Patel, V.B., **Barman, K.** and Tiwari, D.K. (2014). Nutritional disorders and their management strategies, In: Chadha, K.L., Kalia, P. and Singh, S.K. (Eds.), *Horticulture for Inclusive Growth, The Horticulture Society of India, New Delhi, Westville Publishing House, New Delhi, India, ISBN: 978-93-83491-23-0.*
3. Asrey, R. and **Barman, K.** (2015). Eco-friendly postharvest treatments for fruits, In: Choudhary, M.L., Patel, V.B., Siddiqui, M.W. and Mehdi, S.S. (Eds.), *Climate Dynamics in Horticultural Science, Volume 1: Principles and Applications, Apple Academic Press, USA & CRC Press, Boca Raton, Florida, USA, ISBN: 9781771880312.*
4. Nayyer, M.A., Siddiqui, M.W. and **Barman, K.** (2015). Quality of fruits in the changing climate, In: Choudhary, M.L., Patel, V.B., Siddiqui, M.W. and Verma, R.B. (Eds.), *Climate Dynamics in Horticultural Science, Volume 2: Impact, Adaptation, and Mitigation, Apple Academic Press, USA & CRC Press, Boca Raton, Florida, USA, ISBN: 9781771880701.*
5. **Barman, K.**, Sharma, S., Kumari, P. and Siddiqui, M.W. (2016). Salicylic acid. In: Siddiqui, M.W., Ayala-Zavala, J.F. and Hwang, C.A. (Eds.), *Postharvest Management Approaches for Maintaining Quality of Fresh Produce, Springer, USA. ISBN: 978-3-319-23582-0.*
6. **Barman, K.**, Ahmad, M.S. and Siddiqui, W. (2015). Factors affecting the quality of fruits and vegetables: Recent understandings, In: Siddiqui, M.W. (Ed.), *Postharvest Biology and Technology of Horticultural Crops, Apple Academic Press, USA & CRC Press, Boca Raton, Florida, USA, ISBN: 9781771880862.*
7. Kumar, S., **Barman, K.** and Sharma, S. (2016). Postharvest management of commercial flowers. In: Siddiqui, M.W. and Ali, A. (Eds.), *Postharvest Management of Horticultural Crops: Practices for Quality Preservation, Apple Academic Press, USA & CRC Press, Boca Raton, Florida, USA. ISBN: 9781771883344.*
8. Sharma, S., **Barman, K.** and Siddiqui, M.W. (2016). Chitosan: Properties and roles in postharvest quality preservation of horticultural crops. In: Siddiqui, M.W. (Ed.), *Eco-friendly Technology for Postharvest Produce Quality.* Elsevier, Amsterdam. ISBN: 978-0-12-804313-4.
9. Sharma, S., Kumar V., Singh, S.K. and **Barman, K.** (2016). Registration guidelines, regulation, and safety issues of biopesticides. In: Kumar V., Singh S.K. and Sharma S. (Eds.), *Bioassay, production protocol and quality control for Trichoderma based biopesticides- Training manual, ICAR-National Research Centre on Litchi, Muzaffarpur, Bihar, India, pp. 86-93.*

10. Sharma, S., **Barman, K.**, Siddiqui, M.W. and Nath, V. (2017). Training and pruning for improved postharvest fruit quality. In: Siddiqui, M.W. (Ed.), Preharvest Modulation of Postharvest Fruit and Vegetable Quality, Elsevier, USA. ISBN: 978-0-12-809807-3.
11. Prasad, M., **Barman, K.** and Singh, R.K. (2017). Tamarind (*Tamarindus indica* L.): A potential source of hope for the poor farm families. In: Dutta, A.K. and Mondal, B. (Eds.), Fruits for Livelihood: Production Technology and Management Practices. Agrobios (India), Jodhpur, India. ISBN: 978-81-933644-5-1.
12. Asrey, R. and **Barman, K.** (2018). Maturity indices in vegetables: An overview. In: Singh, B., Singh, S. and Koley, T.K. (Eds.), Advances in Postharvest Technologies of Vegetable Crops, Apple Academic Press, USA & CRC Press, Boca Raton, Florida, USA. ISBN: 9781771886192. (In Press).
13. **Barman, K.**, Sharma, S. and Asrey, R. (2018). Postharvest treatments to alleviate chilling injury in fruits and vegetables. In: Barman, K., Sharma, S. and Siddiqui, M.W. (Eds.), Emerging Postharvest Treatments of Fruits and Vegetables, Apple Academic Press, USA & CRC Press, Boca Raton, Florida, USA. ISBN: 9781771887007. (In Press).
14. Sharma, S., Singh, A.K., Singh, S.K., **Barman, K.**, Kumar, S. and Nath, V. (2018). Polyamines for preserving postharvest quality. In: Barman, K., Sharma, S. and Siddiqui, M.W. (Eds.), Emerging Postharvest Treatments of Fruits and Vegetables, Apple Academic Press, USA & CRC Press, Boca Raton, Florida, USA. ISBN: 9781771887007. (In Press).

#### **Book:**

1. **Barman, K.**, Sharma, S. and Siddiqui, M.W. (Eds.) (2018). Emerging Postharvest Treatments of Fruits and Vegetables. Apple Academic Press, USA & CRC Press, USA. ISBN: 978-1-77188-700-7 (In Press).

#### **Conference Proceedings:**

1. Asrey, R. and **Barman, K.** (2011). Recent research trends in postharvest treatments of fruits. National Seminar on Post-harvest Packaging, Cold-chain Logistics and Instrumentation Techniques for Quality and Safety of Perishables. 19-20 December, 2011, CIPHET, Ludhiana, Punjab.
2. Kumar, R., Prasad, M., **Barman, K.** and Mir, H. (2014). *Madhumakshi palan Jharkhand ke liye bardan*. National Seminar on Quality Honey Production for Livelihood Security. 5-6 August, 2014, BAU, Sabour, Bhagalpur, Bihar.

### **VARIETIES RELEASED**

1. **Sabour Litchi – 1**
2. **Sabour Bael – 1**

### **SIGNIFICANT RESEARCH ACHIEVEMENTS**

1. Associated with development of one variety of Bael (Sabour Bael – 1) and one variety of litchi (Sabour Litchi – 1).
2. A new physiological disorder named ‘Stem-end blackening’ identified in mango.
3. Developed technology to reduce sapburn injury in mango after harvest by simple immersion treatment.

4. Technology developed to alleviate chilling injury in mango and pomegranate.
5. Technology developed to reduce postharvest pericarp browning and extended shelf life of litchi fruit up to 30 days.

## PROFESSIONAL AFFILIATIONS

- **Life time member:** Horticultural Society of India, New Delhi
- **Life time member:** The Bihar Horticultural Society, Bihar
- **Life time member:** Agricultural Technology Development Society, Ghaziabad, U.P.
- **Editorial Board member:** Journal of Post Harvest Technology
- **Guest Editor:** Journal of Food Quality, Wiley Hindawi, United Kingdom
- **Reviewer of Journals:**

Sl. No.	Journal name	Publisher	National/ International
1.	Scientia Horticulturae	Elsevier	International
2.	Postharvest Biology and Technology	Elsevier	International
3.	Food Chemistry	Elsevier	International
4.	Plant Physiology and Biochemistry	Elsevier	International
5.	Information Processing in Agriculture	Elsevier	International
6.	Journal of Plant Growth Regulation	Springer	International
7.	Acta Physiologiae Plantarum	Springer	International
8.	Chinese Journal of Oceanology and Limnology	Springer	International
9.	Journal of Horticultural Science and Biotechnology	Taylor & Francis Online	International
10.	Biocontrol Science and Technology	Taylor & Francis Online	International
11.	International Journal of Food Properties	Taylor & Francis Online	International
12.	Natural Product Research	Taylor & Francis Online	International
13.	New Zealand Journal of Crop & Horticultural Science	Taylor & Francis Online	International
14.	Journal of Food Science	Wiley Online Library	International
15.	Journal of the Science of Food and Agriculture	Wiley Online Library	International
16.	Food Science and Nutrition	Wiley Online Library	International
17.	Journal of Food Quality	Wiley Hindawi	International
18.	Journal of Agricultural and Food Chemistry	American Chemical Society	International
16.	Journal of Food Biochemistry	Wiley Online Library	International
17.	Turkish Journal of Botany	Scientific and Technological Research Council of Turkey	International
18.	Sustainable Agriculture Research	Canadian Centre of Science and	International

		Education	
19.	International Journal of Biochemistry and Biotechnology	International Scholars Journals	International
20.	African Journal of Agricultural Research	Academic Journals	International
21.	African Journal of Biotechnology	Academic Journals	International
22.	Indian Journal of Agricultural Sciences	Indian Council of Agricultural Research	National
23.	Journal of Scientific & Industrial Research	CSIR	National

## HONOURS/ AWARDS

1. Awarded **ICAR Junior Research Fellowship (JRF)** in Horticulture group (2007).
2. Awarded **Merit Fellowship** for pursuing Ph.D. by Indian Agricultural Research Institute, New Delhi (2009).
3. Awarded **INSPIRE Fellowship** by Department of Science and Technology, Govt. of India (2010).
4. Qualified **ICAR National Eligibility Test (NET)** in Horticulture (2010).
5. **Best Paper Award** in ‘National Conference on Perspective of Challenges and Options in Litchi Production and Utilization’. 6-7 June, 2017, ICAR-National Research Centre on Litchi, Muzaffarpur, Bihar.
6. **Publons Peer Review Award 2017** as one of the top 1 per cent International peer reviewers in Agricultural and Biological Sciences.
7. **Young Scientist Award 2017** from Agricultural Technology Development Society, Ghaziabad, U.P.

## STUDENT GUIDANCE AS MAJOR ADVISOR

Degree	No. of Students	Degree Status
M.Sc.	1	Awarded
M.Sc.	5	Ongoing