

## Curriculum Vitae

- 1 Name and Designation** : Prof. S. Manivannan,  
Professor
- 2 Correspondence address** : Department of Horticulture, Central University of Tamil Nadu,  
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+91 7602878189; +91 6383582629
- 4 Institution** : Central University of Tamil Nadu, Tamil Nadu, India
- 5 Date of Birth** : 07-02-1973
- 6 Gender (M/F/T)** : Male

### 7. Academic Qualification (Undergraduate onwards)

S.No.	Degree	Year	Subject	University/Institution
1.	B.Sc. (Agri.)	1994	Agriculture	Tamil Nadu Agricultural University, Coimbatore
2.	M.Sc. (Horti.)	1997	Horticulture	Indian Agricultural Research Institute, New Delhi
3.	Ph.D. (Horti.)	2002	Horticulture	Indian Agricultural Research Institute, New Delhi

### 8. Work experience : 20 years

S. No.	Positions held	Name of the Institute	Duration	Jobs carried out
1	Assistant Professor	Central Agricultural University, Pasighat, Arunachal Pradesh, India	9 years 7 months	Teaching, Research & Extension
2	Associate Professor	Sikkim University, Gangtok, Sikkim, India	7 years 8 months	Teaching, Research & Extension
3	Professor	Central University of Tamil Nadu, Thiruvarur, India	Since December 2019 to till date	Teaching, Research & Extension

## 9. Research Guidance

Sl. No.	Institution	Name of students & Topics of Research	Degree & Year		Status
1.	Central Agricultural Univ.	Mr. Vikas Chandra. Genome Analysis of Indigenous Citrus species through AFLP	M.Sc.	2011	Awarded
2.	Sikkim University	Ms. Anjana Pradhan. Growth Analysis and Multi elemental Profiling of Citrus Germplasm Grown Under Aluminium Stress Condition.	M.Sc.	2015	Awarded
3.	Sikkim University	Ms. Deeki Lama Tamang. Metabolic Profiling of Black Turmeric using HPLC	M.Sc.	2015	Awarded
4.	Sikkim University	Mr. Sangay Gyampo Bhutia. Metabolic profiling of different varieties of large cardamom ( <i>Amomum subulatum</i> Roxb.)	M.Sc.	2015	Awarded
5.	Sikkim University	Mr. Rinzing W. Bhutia. Estimation of Dietary Nutrients in <i>Elaeagnus latifolia</i> .	M.Sc.	2015	Awarded
6.	Sikkim University	Mr. Tempo Dorjee Tamang. Multi elemental and Dietary Nutrient Analysis in Yellow Himalayan Raspberry ( <i>Rubus ellipticus</i> ).	M.Sc.	2015	Awarded
7.	Sikkim University	Ms. Chunzom Palmo Lepcha. Organic Nutrient Management in Tomato ( <i>Solanum lycopersicum</i> )	M.Sc.	2015	Awarded
8	Sikkim University	Ms. Kabita Gurung. Metabolic Profiling of Black Pepper ( <i>Piper nigrum</i> ) grown in Sikkim using HPLC.	M.Sc.	2016	Awarded
9	Sikkim University	Mr. Karthick. Productivity of Different Commercial Varieties of Onion Under Different Growth Condition.	M.Sc.	2016	Awarded
10	Sikkim University	Ms. Meenkala Sharma. Estimation of Content and Quality of Oil in Himalayan Olive ( <i>Elaeocarpus spp.</i> )	M.Sc.	2016	Awarded
11	Sikkim University	Ms. Smriti Chettri. Dietary Nutrient and Ionic Profiling of Wild Edible Ferns and its Allies.	M.Sc.	2016	Awarded

12	Sikkim University	Mr. Subash Tamang. Ionomic Profiling of Mandarins ( <i>Citrus reticulata</i> Blanca) Grown in India Using ICPMS	M.Sc.	2016	Awarded
13	Sikkim University	Ms. Karma Deki Bhutia. Standardization of <i>In vivo</i> Propagation Technique for Pepino ( <i>Solanum muricatum</i> ) Under Sikkim Condition	M.Sc.	2017	Awarded
14	Sikkim University	Mr. Lebudki Shabong. Ionomic Profiling of Turmeric ( <i>Curcuma longa</i> ) Germplasm of Northeast Region	M.Sc.	2017	Awarded
15	Sikkim University	Ms. Pritika Rai. Ionome and Metabolic Profiling of Black Pepper and its Relatives Grown In Sikkim.	M.Sc.	2017	Awarded
16	Sikkim University	Ms. Sintinaro Waling. Disease Inhibiting Ability of Electrolyzed Water in Model Horticultural Crops.	M.Sc.	2017	Awarded
17	Sikkim University	Mr. Vivek Yadav. Effect of next generation organic inputs on Okra ( <i>Abelmoschus esculantus</i> (L.) Moench), Palak ( <i>Beta vulgaris</i> var. <i>bengalensis</i> ) and Radish ( <i>Raphanus sativus</i> L.)	M.Sc.	2017	Awarded
18	Sikkim University	Ms. Duyu Monya. Designing an Ionome Database for Horticulture Crops of Sikkim Himalayas.	M.Sc.	2018	Awarded
19	Sikkim University	Ms. Sungjemwala Longchar. Disease Inhibiting Ability of Plant Extracts on Major Pathogens of Horticulture Crops.	M.Sc.	2018	Awarded
20	Sikkim University	Ms. Upasana Pradhan. Comparative Analysis of Organic and Inorganic Tea ( <i>Camellia Sinensis</i> ) for Quality Parameters.	M.Sc.	2018	Awarded
21	Sikkim University	Ms. Lunishree Rai. Soil less Media on the Yield and Quality of Strawberry Grown in Vertical Farming System.	M.Sc.	2019	Awarded
22	Sikkim University	Ms. Sushmita Chettri. Disease Inhibiting Ability of Short Sequence Peptides against Bacterial	M.Sc.	2019	Awarded

		Disease of the Solanaceous Vegetables.			
23	Sikkim University	Mr. Tek Bhadur Chettri. Essential and Trace Elements on the Drought Tolerance of Citrus ( <i>Citrus spp.</i> )	M.Sc.	2019	Awarded
24	Central University of Tamil Nadu	Mr. Jinto James. Discerning of Antimicrobial Peptides from Whole Genome Sequenced Temperate Fruit crops	2021	M.Sc.	Awarded
25	Central University of Tamil Nadu	Mr. Nivethakumar S., Discerning of Antimicrobial Peptides from Whole Genome Sequenced Tropical and Subtropical Fruit crops	2021	M.Sc.	Awarded
26	Central University of Tamil Nadu	Ms. Cythanya Uthaman. Shortening of Germination Time Through Seed Treatment in Palmyra Palm	2022	M.Sc.	Awarded
27	Central University of Tamil Nadu	Ms. Gobika N. Cotton Stalks and Palmyra Fruit Husk as Potting Media for Marigold	2022	M.Sc.	Awarded
28	Central University of Tamil Nadu	Ms. Shristi Sundi. Micro green Production of Indigenous Leafy Vegetables in Hydroponics and Soil Cultivation Systems	2022	M.Sc.	Awarded
29	Central University of Tamil Nadu	Ms. Selshiya S. Value Addition of Tender Palmyra Fruit (Nungu) through Product Development	2023	M.Sc.	Awarded
30	Central University of Tamil Nadu	Ms. Shalini T. Value Addition of <i>Angiopteris evecta</i> through Screening for Pharmaceutically Important Compounds	2023	M.Sc.	Awarded
31	Central University of Tamil Nadu	Ms. Siddhi Rathore. Evaluation of Rose Varieties for open Field Cultivation in Thiruvarur Region of Cauvery Delta	2023	M.Sc.	Awarded
32	Central University of Tamil Nadu	Ms. Preethi S. Production of micro-greens in a vertical hydroponics system for nutritional and environmental security		M.Sc.	Ongoing
33	Central University of Tamil Nadu	Ms. Sankareswari M. Value addition of palmyra and areca nut through product development		M.Sc.	Ongoing

34	Central University of Tamil Nadu	Ms. Sivanesan K. Re-sequencing of jackfruit genome for identification of useful SNPs		M.Sc.	Ongoing
35	Central University of Tamil Nadu	Ms. Sravya Keerthana T. Re-sequencing of periwinkle genome after irradiation intervention for useful SNPs		M.Sc.	Ongoing

01	Sikkim University	Mr. Venkata R. Muddarsu. Ionome and Proteome Assisted Characterization of Drought Tolerance in Chilli [ <i>Capsicum annuum</i> (L.)].	2018	Ph.D.	Awarded
02	Sikkim University	Ms. Nadia Debbarma. Identification of the geographical origin of jackfruit ( <i>Artocarpus heterophyllus</i> Lam.) through multi elemental fingerprinting using ICPMS	2019	Ph.D.	Awarded
03	Sikkim University	Mr. Jitendra Kr. Kushwaha. Ionome and Proteome Assisted Characterization of Aluminium Tolerance in Cowpea [ <i>Vigna unguiculata</i> (L.) Walp.]	2019	Ph.D.	Awarded
04	Sikkim University	Ms. Deeki Lama Tamang. Standardization of Single Window Organic Technology for Safe Production of Ginger	2021	Ph.D.	Awarded
05	Sikkim University	Ms. Smriti Chettri. Standardization of propagation method and elucidation of nutritional behavior and secondary metabolites in wild edible ferns		Ph.D.	Ongoing
06	Central University of Tamil Nadu	Ms. Manonmani S. Horticultural crops derived short sequence peptides as potential growth modifying and disease suppressing agents		Ph.D.	Ongoing
07	Central University of Tamil Nadu	Mr. Indian G. Fruit micro biome of <i>Citrus spp.</i> towards identifying beneficial microbes		Ph.D.	Ongoing

## 10. Administrative experience

Sl. No.	Institution	Post held	Years		Total Experience
			From	To	
1	Central Agricultural University	Students' Welfare Officer	2005	2012	6 years
1.	Sikkim University	Head, Department of Horticulture	2013	2016	3 years
2.	Sikkim University	Dean, Students Welfare	2016	2019	3 Years
3.	Sikkim University	Chairman, Working committee on Admission	2016-17	2018-19	3 years
4	Central University of Tamil Nadu	Head, Department of Horticulture	2020	Till date	2 years

## 11. Professional Recognition/ Award/ Fellowship received

S. No.	Name of Award	Awarding Agency	Year
1	Junior Research Fellowship	ICAR-IARI, New Delhi	1995-97
2	Senior Research Fellowship	ICAR-IARI, New Delhi	1997-2002
3	Inspired Teacher Award	Sikkim University	2015

## 12. Externally Funded Projects

SN	Title of Research Project	Funding Agency	Period	PI/Co-PI/CCPI	Amount
1	Production of Disease free VAM inoculated Khasi mandarin through shoot tip grafting	Mini Mission-I (MM-I), Ministry of Agriculture	2005-2008	CCPI	Rs. 17.35 Lakhs
2	Survey, Collection, Characterization, Evaluation and multiplication of Jatropha in AP	NOVOD Board	2005-2010	PI	Rs. 8.13 Lakhs
3	Application of ICTs in Extension Service Provision in AP	DSIR, New Delhi	2007-2011	Co-PI	Rs. 16.0 Lakhs

4	Establishment of Scion Bud wood and Rootstock bank for citrus	MM-I, Ministry of Agriculture	2008-2012	CCPI	Rs. 55.0 Lakhs
5	Potential bio control of the invasive species <i>Hedychium gardenerianum</i> , <i>H. flavescense</i> and <i>H. coronarium</i> in Sikkim	CABI, United Kingdom	2013-2020	PI	Rs. 10.04 lakhs
6	Tea Research in Sikkim Himalayas	Tea Board, Kolkata	2015-2019	PI	Rs.15.0 lakhs
7	Extension in Shelf Life of Indigenous Fruits of Sikkim by Irradiation Technology for Livelihood Security	BARC, Mumbai	2016 – 2021	Co-PI	Rs.27.07 Lakhs
8	Deciphering factors affecting the N <sub>2</sub> O emission from rice cultivated soil of Cauvery delta	UGC -Stride	2021-2023	PI	Rs.7.08 Lakhs

### 13. Professional Training

S.No	Title of the programme	Period and Date	Organizer
1	Agriculture Research Project Management	One week (1 <sup>st</sup> to 6 <sup>th</sup> March 2004)	Central Agricultural University, Imphal and NAARM, Hyderabad
2	Intellectual Property Management of Genetic Resources-Tools and Dimensions	21 days (9 <sup>th</sup> to 29 <sup>th</sup> November 2005)	Kerala Agricultural University, Thrissur, Kerela
3	Application of RAPD and AFLP markers in Horticultural Crops	21 days (17 <sup>th</sup> Feb. to 9 <sup>th</sup> March 2009)	University of Agricultural Sciences, Bangalore
4	Advanced Bioinformatics tools and its applications in agriculture	05 days (25-29 September 2018)	National Academy of Agricultural Research Management, Hyderabad

### 14. Publication

Sharma, D., Upadhyay, S., **Manivannan, S.**, & Bhutia, K. D. 2023. Value addition and product diversification of mango ginger (*Curcuma amada*). *Journal of Postharvest Technology*, 11(1), 66-76.

Pradeep, M., Senthilkumar, S., Kumar, A. R., & **Manivannan, S.** 2023. Essentiality and role of Hydrogel Technologies in commercial horticulture production. *Water and Energy International*, 66(1), 15-18.

Karthiga P., Senthilkumar, S., Srivignesh S., & **Manivannan S.** 2023. Advances in enhancement of nutraceutical values through Omics technologies in vegetables. *The Pharma Innovation Journal* 12(3), 4830-4837.

Meena, R., Senthilkumar, S. & **Manivannan, S.** 2022. Senile Orchard Management System in Tropical Fruit Production. *Int. J. Ag. Env. Biotech.*, 15(04), 861-866.

Manonmani, S., Senthilkumar, S., & **Manivannan, S.** 2022. Multilevel functionality of biostimulants in sustainable horticulture for modern era. *The Pharma Innovation Journal*, 11(10), 1283-1288.

Manonmani, S., Senthilkumar, S., AksharaGovind, U.S. & **Manivannan, S.** 2022. Application of Artificial Intelligence in Fruit Production: A Review. *Agriculture Science Digest*. DOI: 10.18805/ag.D-5482

Vijayalakshmi, K., Senthilkumar, S., Akshara Govindh, U.S., & **Manivannan, S.**, 2022. Importance and Possible Approaches in Adoption of Indoor Fruit Culture for Indian Families, *International Journal of Current Research and Review*, DOI: [http:// dx.doi.org/ 10.31782/ IJCRR.2022.14406](http://dx.doi.org/10.31782/IJCRR.2022.14406), 34-39.

James, J., Senthilkumar, S., & **Manivannan, S.**, 2022. Rebooting the value of traditional knowledge in scientific fruit farming, *Eco. Env & cons.* 28 (January suppl. Issue), DOI: [http:// doi.org/ 10.53550/ EEC. 2022.v28i01s.028](http://doi.org/10.53550/EEC.2022.v28i01s.028), 194- 199.

Divyabharathi, G., Senthilkumar, S., AksharaGovind, U. S., & **Manivannan, S.** 2021. Novel techniques in promoting the production of high value low volume fruit crops. *International Journal of Agricultural Sciences and Veterinary Medicine*, 9(4), 26-29.

Deena Dayalan, M., Ramesh Kumar, A., Senthilkumar, S., Srivignesh, S., & **Manivannan, S.** Impacts of Flooding Stress in Fruit Crops and Its Adaptation Strategies. *Ricerca International Journal of Multidisciplinary Research and Innovation*, 2(3), 1-6.



Vidhya, C., Senthilkumar, S., & **Manivannan, S.**, 2021. Recent trends in production of dry flowers and foliages, *The Pharma Innovation Journal* , 10(11) ,2135- 2139.

Afiya, R.S., Senthilkumar, S., & **Manivannan, S.**, 2021. Recent Trends with Mutation Breeding in Fruit Crop Improvement, *Plant Cell Biotechnology and Molecular Biology*, 22 (71&72) , 393-403.

Tamang, D.L., & **Manivannan, S.**, 2020. Next generation organic inputs on the soft rot disease, growth, yield and quality of ginger, *Zingiber officinale* L., grown in Sikkim Himalaya, *Journal of Applied Horticulture*,22(2), DOI: <https://doi.org/10.37855/jah.2020.v22i02.27>, 147-151.

Gurung, K., & **Manivannan S.**, 2020. Morphological characterization and secondary metabolites profile of black pepper (*Piper nigrum* L.) genotypes from Sikkim, *Journal of Spices and Aromatic Crops*, 29 (2), 98-104. doi : 10.25081/josac.2020.v29.i2.6347,

Debbarmaa, N., **Manivannan, S.**, Muddarsua, V.R., Umadevi, P., & Upadhyay, S., 2020. Ionome signatures discriminates the geographical origin of jackfruits (*Artocarpus heterophyllus* Lam.), *Food Chemistry*, <https://doi.org/10.1016/j.foodchem.2020.127896>.

Umadevi, P., **Manivannan, S.**, Fayad, A.M., & Shelvy, S., 2020. *In silico* analysis of phytochemicals as potential inhibitors of proteases involved in SARS-CoV-2 infection, *Journal of Biomolecular Structure and Dynamics*, DOI: 10.1080/07391102.2020.1866669.

Deeki, L.T., & **Manivannan, S.**, 2019. Targeted metabolic profiling of Black turmeric (*Curcuma caesia*Roxb.), *Research Journal of Biotechnology*, 14(9), 24-28.

Lepcha, T. T., Upadhyay, S., **Manivannan, S.**, Bhutia, K. D., Sharma, L., & Muddarsu, V. R. (2018). Proximate and nutritional analysis of Culantro (*Eryngium foetidum*). *Journal of Pharmacognosy and Phytochemistry*, 7(1S), 3129-3134.

Subba, P., Upadhyay, S., Muddarsu, V.R., **Manivannan, S.**, & Lepcha, R., 2018. Determination of nutritional profile of Himalayan filbert (*Corylus ferox*), *The Pharma Innovation Journal*, 7(11), 528-531.

Pandey, Y., Upadhyay, S., **Manivannan, S.**, Shama, L., & Bhatt, S.S., 2018. Nutraceutical potential of *Ficus roxburghii* an underutilized fruit of Sikkim Himalayas, *Journal of Applied and Natural Science*, 10-3,876-880.

- Subba, P., Upadhyay, S., Muddarsu, V.R., **Manivannan, S.**, & Lepcha, R., 2018. Determination of Multi Element Profile of Himalayan Filbert (*Corylus ferox*), *Journal of Pharmacognosy and Phytochemistry*, 7(6), 2141-2144.
- Khatun, U., Sharma, L., **Manivannan, S.**, & Muddarsu, V.R., 2018. Proximate analysis, elemental profiling and antioxidant activities of *Tupistra nutans* Wall. grown in Sikkim Hill, *Journal of Pharmacognosy and Phytochemistry*, 7(2), 3630- 3633.
- Kushwaha, J.K., & **Manivannan, S.**, 2018. Multivariate analysis of plant morphological characters for aluminium tolerance in Cowpea Genotypes under hydroponics. *Research, Research Journal of Biotechnology*, 13(7), 80-90.
- Debbarma, N., **Manivannan, S.**, & Kushwaha, J.K., 2018. Discriminating geographical origins of Indian jackfruit (*Artocarpus heterophyllus* Lam.) through multivariate analysis of physico-chemical characters, *Journal of Pharmacognosy and Phytochemistry*, 7(3), 1258-1265.
- Chettri, S., & **Manivannan, S.**, 2018. Nutrient and Elemental Composition of Wild Edible Ferns of the Himalaya, *American Fern Journal*, 108(3), 95–106.
- Gurung, R., Upadhyay, S., Muddarsu, V.R., **Manivannan, S.**, & Gurung, T., 2018. Determination of nutritional profile of Nakima (*Tupistra nutans*), *The Pharma Innovation Journal*, 7(11), 536-539.
- Lepcha, R., Upadhyay, S., Muddarsu, V.R., **Manivannan, S.**, & Bhutia, R.W., 2018. Study on value addition and products diversification of Mallero (*Elaeagnus latifolia*), *The Pharma Innovation Journal*, 7(11), 532-535.
- Gurung, R., Upadhyay, S., Muddarsu, V.R., **Manivannan, S.**, & Gurung, T., 2018. Determination of Multi -elemental Profile of Nakima (*Tupistra nutans*), *Journal of Pharmacognosy and Phytochemistry*, 7(6), 2137-2140.
- Pandey, Y., Upadhyay, S., Sharma, L., **Manivannan, S.**, & Muddarsu, V.R., 2018. Nutritional Compositions of *Baccaureasapida* and *Eleaocarpussikkimnesis* of Sikkim Himalaya, *International Journal of Current Microbiology and Applied Sciences*, 7(2), 2101-2106.
- Muddarsu, V.R., & **Manivannan, S.**, 2017. In vitro screening of chilli (*Capsicum annum* L.) cultivars for drought tolerance, *Chemical Science Review and Letters*, 6 (24), 2636-2644.

Chandra, V., **Manivannan, S.**, & Mannade, A.K., 2015. Phylogenetic relationship of indigenous citrus species through AFLP analysis, *Annals of Plant and Soil Research*, 17, 314-317.

Pradhan, S., **Manivannan, S.**, & Tamang, J.P., 2015. Proximate mineral composition and antioxidant properties of some wild leafy vegetables, [\*Journal of scientific and industrial research\*](#) , 74(3), 155-159.

**Manivannan,S.**, & Chadha, K. L., 2011. Standardization of time of sampling for leaf nutrient diagnosis on Kinnow mandarins in NW India, *Journal of Plant Nutrition*, 34, 1820-1827.

### 15. Books and Book Chapters Published

S.No	Title	Author's Name	Publisher	Year of Publication
1.	Adaptation strategies towards climate change in fruit production -past, present and future.	Senthilkumar, S. Chithra, M.,& <b>Manivannan, S.</b>	ISBN:978-93-9279-803-0	2022
2.	Modern Mutation Breeding Approaches for Improving Fruit Crops.	Afiya, R.S., Senthilkumar, S. & <b>Manivannan, S.</b>	ISBN: 978-93-5570-446-7	2022
3.	Essentiality of Horticulture in soothing the impact of climate change.	Senthilkumar, S., Manonmani, S. & <b>Manivannan, S.</b>	ISBN:978-93-9279-803-0	2022
4.	High Yielding Varieties of <i>Solanum melongena</i> L. and their Yield Potential	Ramesh Kumar, A., Srivignesh, S., Vijayalakshmi, K., & <b>Manivannan S.</b>	Nova Science Publishers , Inc.	2021
5	Packaging and Storage of Stone Fruits M.M. Mir et al. (eds.), <i>production technology of stone fruits</i>	Ramakrishna, K., Smruthi, J., and <b>Manivannan, S.</b>	Springer Nature Singapore Pvt. Ltd. DOI: <a href="http://doi.org/10.1007/978-981-15-8920-1-11">http:// doi.org / 10.1007/ 978-981-15-8920-1-11</a>	2021
6	Sapota ( <i>Manilkara achras</i> (Mill.) Fosberg), Tropical Fruit Crops: Theory to Practical	Senthilkumar, S., Srivignesh, S., Rameshkumar, A., & <b>Manivannan, S.</b>	Jaya Publishing House, New Delhi	2021
7	Rhizosphere Microbiome: The Next Generation Crop	Anandaraj, M., <b>Manivannan, S.</b> and	Scrivener Publishing.	2021

	Improvement Strategy. In: Environmental and Agricultural Microbiology: Applications for Sustainability	Umadevi, P. (Eds.) Mishra, B.B., Nayak, S.K., Mohapatra, S. and Samantaray, D.	<a href="https://doi.org/10.1002/9781119525899.ch11">https://doi.org/10.1002/9781119525899.ch11</a>	
8	Plant Microbe Interface: The Plant Antimicrobial Peptides. In: Plant Biotic Interactions.	<b>Manivannan S.</b> , Umadevi P. (Eds.)Varma A., Tripathi S., Prasad, R	Springer, <a href="https://doi.org/10.1007/978-3-030-26657-8_15">https://doi.org/10.1007/978-3-030-26657-8_15</a>	2019
9.	Local Germplasm and Landraces of Vegetables: Availability, Market Price, and Perception of Consumer.	Pradhan, A., Sharma, L., <b>Manivannan, S.</b> , &Bhutia, K. D.	Apple Academic Press.	2018
10	Ionome assisted safe food production for remunerative organic horticulture, In: Doubling Farmers income through Horticulture.	<b>Manivannan, S.</b>	Astral, New Delhi.	2016
11	Genetic Resources of Horticultural Crops	Singh, D & <b>Manivannan, S</b>	IBD & Co	2009

#### 16. Training, workshop, conference conducted/organized

S.No	Type	Title of the Event	Target	Date & Venue	Role
1	<b>International Symposium</b>	Next Generation Approaches for sustainable development of hill and upland horticulture	Scientists, Policy makers, Farmers	5 to 7.11.2015 Sikkim University, Gangtok	Organizing Secretary
2	<b>National Seminar/ symposium</b>	Community based Sustainable Natural Resources Management and Development in North Eastern India	Scientists, Policy makers, Farmers	26 to 27.04.08 College of Horticulture & Forestry (CHF) Pasighat, Arunachal Pradesh	Member, Organizing Committee

3		Sustainable Management of Acid Soils for Higher crop Productivity	Scientists, Policy makers,	22 to 24. 09.08 CHF, Pasighat	Member, Organizing Committee
4		IPM strategies to combat emerging Pests in the current scenario of Climate Change	Scientists, Policy makers, Farmers	29 to 30.01.09 CHF, Pasighat, Arunachal Pradesh	Co Chairman, Technical Sessions & Member Publications
5		National Traditional Paddy Conference	Scientist, Policy makers, Farmers	18-19 <sup>th</sup> March 2023 Central University of Tamil Nadu	Convener
6	<b>Workshop</b>	Citriculture in North East: Approaches and Avenues	Farmers & Officers of line Deptt.	22 to 28. 03.07 CHF, Pasighat,	Organizing Secretary
7		National Workshop on System Biology and Sustainable Development	Scientists and Research scholars	17-19 . 03.2016 Sikkim University	Organizing Secretary
8		Impact of Climate Change on Agro Biodiversity	Scientists and Research scholars	29-30 <sup>th</sup> November 2022 Central University of Tamil Nadu	Chairman
9	<b>Brainstorming</b>	National level brainstorming on the Indian Citrus industry	Scientists	15.11.2015  Sikkim University	Convener
10	<b>Short term training</b>	Bioresource exploration characterization and conservation in Horticultural cops	Scientists	23.10 10 to 12.11.10  CHF, Pasighat	Course Director

11	<b>Officers' Training</b>	Recent Advances in Citriculture	Extension Deptt. Personnel of all North Eastern States	24 to 29 .09.07 College of Horticulture & Forestry (CHF) Pasighat	Organizing Secretary
12		Instrumentation for analysis of micronutrients	SAMETI, Govt.of Sikkim	26 to 30.08.13 Sikkim University	Course Director
13	<b>Farmers' Training</b>	Rejuvenation of Khasi mandarin orchards	Tribal farmers	12 & 13.01.06 Renging, Arunachal Pradesh	Organizing Secretary
14		Rejuvenation of Khasi mandarin orchards	Tribal farmers	22.04.06, Ayeng, Arunachal Pradesh	Organizing Secretary
15		Pickling of Jackfruit	Tribal women farmers	15.07.09, Sika-tode, Arunachal Pradesh	Coordinator
16		Integrated pest management in citrus	Tribal farmers	28.07.09, Rina, Arunachal Pradesh	Coordinator
17		Integrated pest management in vegetable Cole crops	Tribal farmers	12.08.09, Yagrung, Arunachal Pradesh	Coordinator
18		Integrated Horticulture cum Aquaculture	Tribal farmers	13.08.09, Runne, Arunachal Pradesh	Coordinator
19	<b>Kisan Mela/ Agri. Fair</b>	Kisan Mela 06	Farmers, Extension Deptt. Personnel,	02.11.06, CHF Pasighat, Arunachal	Organizing Secretary

			Students	Pradesh	
20	<b>Kisan Mela/ Agri. Fair</b>	Kisan Mela 07	Farmers, Extension Deptt. Personnel, Students	11 and 12.12.07 CHF, Pasighat, Arunachal Pradesh	Organizing Secretary
21		North East Agri Fair- 2008	Farmers, Extension Deptt. Personnel	03 to 05.10.08 Gangtok, Sikkim	In Charge, Exhibition Stall of CHF Pasighat, Arunachal Pradesh
22		North East Agri Fair- 2009	Farmers, Extension Deptt. Personnel	28.01.09 CHF, Pasighat, Arunachal Pradesh	Co chairman Auditorium and Pandal committee
23	<b>Participatory demonstration</b>	Mass Loranthus eradication Programme	Citrus growers, Students	20.02.2012	Coordinator