(Roshan Manandhar)

**College of Tropical Agriculture and Human Resources**

(Department of Plant and Environment Protection Sciences)

FTE Distribution: 0% I; 0% R; 100% E

**Education**

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| **Degree** | **University** | **Major** |
| BS | Tribhuvan University, Nepal | Statistics, Mathematics, Physics |
| BS (Agriculture) | Odisha University of Agriculture and Technology, India | Entomology, Pathology, Nematology |
| MS  PhD | University of Hawaii (UH) at Manoa, USA  UH at Manoa, USA | Entomology  Entomology |

**Lifetime and Fellow Achievement Awards (peer nominated and endorsed national and International-important for those without accreditation that is peer nominated and endorsed, recognized)**

1. Tanada Family Scholarship (UH Foundation 2013)
2. Wallace Mitchell Award [Department of Plant and Environmental Protection Sciences (PEPS) 2012]
3. Monsanto Graduate Student Fellowship Award [College of Tropical Agriculture and Human Resources (CTAHR) 2012]
4. Best PEPS Oral Presentation (CTAHR Symposium 2011)
5. Erhorn Scholorship (Department of PEPS 2010)
6. Gamma Sigma Delta Award (CTAHR Symposium 2010)
7. Best PEPS Poster Presentation (CTAHR Symposium 2009)
8. Minoru Tamashiro Award (Department of PEPS 2008)
9. Best PEPS Poster Presentation (CTAHR Symposium 2008)
10. Best Plant Protection Oral Presentation (Society of Agriculture Scientists Convention, Nepal 2003)

11. Scholarship awarded from Indian Council of Agricultural Research for BS (Agriculture) study (Government of India 1992)

**Professional Appointments**

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| **Title** | **Employer** | **Dates Employed** |
| Technical Officer (Entomology) | Nepal Agricultural Research Council, Nepal | Oct 1998 – Dec 2004 |
| Graduate Research Assistant  Post-doctoral Fellow  Research Support  Vector Control Entomologist  Assistant Extension Agent | Department of PEPS, UH  Lincoln University of Missouri  Department of PEPS, UH  Hawaii Department of Health  CTAHR Cooperative Extension, UH | Jan 2005 – Aug 2013  Aug 2013- Dec 2015  Jan 2016 – May 2017  Jun 2017 – Mar 2018  Mar 2018 - current |
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**Courses Taught**

Course Number and Title (credits)

N/A

**Publications (reverse chronological order)**

Books

N/A

Book Chapters

N/A

Conference Proceedings

1. Perez, E. A., Hooks, C. R. R., Wang, K-H., Wright, M. G., Almeida, R. P. P. and **Manandhar, R.** (2008). The virulence of *Banana bunchy top virus* in banana plants after injection with a bananacide. Phytopathology 98 (6): S124-S124.

Refereed Journal Publications

1. **Manandhar, R.**, Li, J. and Cheng, Z. (2020). Survey of entomopathogenic nematodes in various landscape systems on Oahu, and their pathogenicity against coconut rhinoceros beetle (Coleoptera: Scarabaeidae). Nematropica 50: 36-44.
2. Pinero, J. C. and **Manandhar, R**. (2020). Ant attendance and arthropod diversity on elderberry extrafloral nectaries are influenced by plant genotype and pruning method. Arthropod-Plant Interactions 14: 595-604.
3. Cheng Z., Kellar M., Bhandari, B. and **Manandhar R.** (2018). Lobate lac scale (*Paratachardina pseudolobata*) invades from Oahu to neighbor island. Proceedings of Hawaiian Entomological Society 50: 1-8.
4. **Manandhar, R.**, Wang, K-H., Hooks, C. R. R. and Wright M. G. (2017). Effects of strip-tilled cover cropping on the population density of thrips and predatory insects in a cucurbit agroecosystem. Journal of Asia-Pacific Entomology 20: 1254-1259.
5. **Manandhar, R.** and Wright, M. G. (2016). Within-field spatial distribution patterns of corn planthopper, *Peregrinus maidis*, and severity of hopperburn and Maize mosaic virus symptoms as influenced by sunn hemp intercropping. Entomologia Experimentalis et Applicata 161: 121-130.
6. **Manandhar, R.** and Wright, M. G. (2016). Effects of interplanting flowering plants on biological control of corn earworm (Lepidoptera: Noctuidae) and thrips (Thysanoptera: Thripidae) in sweet corn. Journal of Economic Entomology 109: 113-119.
7. Pinero, J. C. and **Manandhar, R.** (2015). Effects of increased crop diversity using trap crops, flowering plants and living mulches in vegetable insect pests. Trends in Entomology 11: 1-19.
8. **Manandhar, R.** and Wright, M. G. (2015). Enhancing biological control of corn earworm, *Helicoverpa zea* and thrips through habitat management and inundative release of *Trichogramma pretiosum* in corn cropping systems. Biological Control 89: 84-90.
9. **Manandhar, R.** and Hooks, C. R. R. (2011). Using protector plants to reduce the incidence of *Papaya ring spot virus* – watermelon strain in zucchini. Environmental Entomology 40: 391-398.
10. Hooks, C. R. R., Wang, K-H., Pradhan, N. C., **Manandhar, R.**, Wright, M. G. and Vorsino, A. (2011). Population distribution of *Pentalonia nigronervosa* (Hemiptera: Aphididae) within banana mats: Influence of plant age and height on sampling and management. Journal of Economic Entomology 104: 947-955.
11. Hooks, C. R. R., **Manandhar, R.**, Perez, E. A., Wang, K-H. and Almeida, R. P. P. (2009). Comparative susceptibility of two banana cultivars to *Banana bunchy top virus* under laboratory and field environments. Journal of Economic Entomology 102: 897-904.
12. Hooks, C. R. R., Fukuda, S., Perez, E. A., **Manandhar, R.**, Wang, K-H., Wright, M. G. and Almeida, R. P. P. (2009). Aphid transmission of *Banana bunchy top virus* to banana after treatment with a bananacide. Journal of Economic Entomology 102: 493-499.
13. **Manandhar, R.**, Hooks, C. R. R. and Wright, M. G. (2009). Influence of cover crop and intercrop systems on *Bemisia argentifollii* (Hemiptera: Aleyrodidae) infestation and associated squash silveleaf disorder in zucchini. Environmental Entomology 38: 442-449.
14. Hooks, C. R. R., Wright, M. G., Kabasawa, D. S., **Manandhar, R.** and Almeida, R. P. P. (2008). Effect of *Banana bunchy top virus* infection on morphology and growth characteristics of banana. Annals of Applied Biology 153: 1-9.

Extension Publications

1. Wang, K.-H., Budhathoki, S., Pugh, M., Shikano, I., Silva, J., Uyeda, J. and **Manandhar, R.** (2021). Insecticide resistance management for diamondback moth in organic farms: Integration of trap cropping, intermittent sprinkler irrigation and biological control. Hanai Ai Newsletter Jan-March 2021.
2. Budhathoki, S., Wang, K.-H., Waisen, M., Meada, M., Paudel, R., Silva, R. and **Manandhar, R.** (2020). Using trap crops and entomopathogenic nematodes to manage caterpillar pests on head cabbage. Hanai Ai Newsletter June-August 2020.

1. **Manandhar, R.** and Pinero, J. C. (2015). Aphid pests of cole crops in Missouri. Lincoln University Cooperative Extension, Fact Sheet #18-H-2015.
2. **Manandhar, R.** and Pinero, J. C. (2015). The pest caterpillars of cole crops in Missouri - I. Identification and life cycle. Lincoln University Cooperative Extension, Fact Sheet #18-F-2015.
3. **Manandhar, R.** and Pinero, J. C. (2015). The pest caterpillars of cole crops in Missouri - II. Management. Lincoln University Cooperative Extension, Fact Sheet #18-H-2015.
4. **Manandhar, R.** and Pinero, J. C. (2015). The Harlequin Bug. Lincoln University Cooperative Extension, Fact Sheet #18-F-2015. The Harlequin Bug. Lincoln University Cooperative Extension, Fact Sheet # 18-E-2015.
5. Hooks, C. R. R., Chandara, K., Fallon, D., Wang, K-H and **Manandhar, R.** (2007). The impact of sunn hemp cover cropping on belowground organisms and nutrient status associated with a cucumber planting. Cooperative Extension Service, College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa, SCM -21.

Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)

N/A

Leadership Roles (Committees, Boards, Advisory, etc.)

1. Member, Hawaii Tropical Fruit Growers’ Association (2018-present)
2. Member, Rapid Ohia Death Working Group (2018-present)
3. Member, Rose-ringed Parakeet Working Group (2018-present)
4. Coordinator, Invasive Pest Working Group (2018-present)
5. Chair, Kauai Invasive Species Committee (current)
6. Member, Mamalu Poepoe Working Group (2017-present)
7. Member Society of Nepalese in Hawaii (life-time)
8. Member, Search Committee for Junior/Assistant Extension Agent Position (Ornamental and Landscape) chaired by Teresita Amore (2018)
9. Member, Search Committee for Junior/Assistant Extension Agent Position (Ornamental and Landscape) chaired by Emilie Kirk (2019)
10. Member, Search Committee for Kauai County Administrator Position chaired by Susan Miyasaka (2019)
11. Member, Early Detection and Rapid Response Working Group (2020-present)
12. Member, Kauai Weed Control Working Group (2020-present)
13. Member, Entomological Society of America (until 2019)
14. Member, Society of Oversees Nepalese Entomologist (life-time)

**Graduate Students**

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| Category | Current Number of Students | Number Graduated (Career) |
| *Chair* of Master’s Committees |  |  |
| *Chair* of PhD Committees |  |  |
| Member of Master’s Committees | 1 | 0 |
| Member of PhD Committees |  |  |

**Grant Support (Active)**

1. CTAHR Extension faculty communicating on current pest concerns and research. Group POW. Smith Lever Funding. $60,000. 2018-22 (PI).
2. Invasive species extension and management. Extension POW. Smith Lever Funding. $4,500. 2019-23 (PI).
3. A unified proposal for National Clean Plant Network – Sweet Potato. $40,000. 2021-22 (Co-PI).
4. Organic Sweet Potato IPM and soil health management for small and mid-size farm. Organic Agriculture Research and Extension Initiative (OREI), USDA, NIFA. $7,50,000. 2021-?? (Co-PI).
5. Enhancing biological control of citrus sooty mold complex with a novel control technology using entomopathogenic nematode-water storing hydrogels in IPM approach. Western IPM. $30,000. 2021-?? (Co-PI).
6. Improving CTAHR’s language access to support a more inclusive extension system in Hawaii. Extension Group POW. $74,000. 2021-23 (Co-PI).
7. Hawaii integrated pest management program for diamondback moth and other lepidopteran pests on crucifers. Hawaii Department of Agriculture Grant. $26,400. 2019-?? (Co-PI).

**Presentations at Conferences**

1. Plant, pests and community: The UH CTAHR extension program. Manandhar, R\* Hawaii Invasive Species Awareness month (2021). A Virtual presentation, Hawaii Invasive Species Council. February 23, 2021.
2. Coconut rhinoceros beetle (*Oryctes rhinoceros*) and its management effort on Oahu in Hawaii. Cheng, Z.\*, Kellar, M., Hara, A. H. and Manandhar, R**.** International Congress of Entomology, Orlando, Florida. September 25-30, 2016.
3. Survey of entomopathogenic nematodes on Oahu: potential for biological control of coconut rhinoceros beetle. Manandhar, R.\*, Kellar, M. and Cheng, Z. Pacific Branch Entomological Society of America (PBESA), Honolulu, Hawaii. April 3-6, 2016.
4. Evaluation of trap crops for their attractiveness to the key caterpillar pest complex and the harlequin bug in cole crops. Manandhar, R.\* and Pinero, J. C. Entomological Society of America (ESA), Minneapolis, Minnesota. Nov 15-18, 2015.
5. Arthropod abundance and diversity on elderberry extrafloral nectaries is influenced by cultivar and pruning methods. Manandhar, R.\* and Pinero, J. C. ESA, Portland, Oregon. Nov 16-19, 2014.
6. Incidence of MMV and MCMV in corn, in relation to within-field activity of their vector insects as influenced by sunn hemp intercropping. Manandhar, R.\* and Wright, M. G. ESA, Portland, Oregon. Nov 16-19, 2014.
7. Augmentative- and conservation biological control of corn earworm, *Helicoverpa zea* in Hawaii. Manandhar, R. and Wright, M. G.\* PBESA, Tucson, Arizona. April 6-9, 2014.
8. Enhancing bio-control agents of *Helicoverpa zea* and thrips through incorporating floral resources in corn - cover crop intercropping systems. Manandhar, R.\* and Wright, M. G. International Symposium on Biological Control of Arthropods, Pucon, Chile. March 4-8, 2013.
9. Examining the spatio-temporal distribution pattern of corn planthopper, *Peregrinus maidis* in corn – sunn hemp cropping system and corn monoculture. Manandhar, R.\* and Wright, M. G. ESA, Knoxville, Tennessee. Nov 11-14, 2012.
10. Spatio-temporal distribution pattern of corn planthopper, *Peregrinus maidis* in corn-sunn hemp intercropping system. Manandhar, R.\* and Wright, M. G. CTAHR Symposium, Manoa, Hawaii. April 13-14, 2012.
11. *Helicoverpa* Management: problems and prospects in Nepal. Manandhar, R.\* and Pandey, R. R. ESA, Reno, Nevada. Nov 13-16, 2011.
12. Parasitism and predation of corn earworm (*Helicoverpa zea*) eggs in corn - sunn hemp cropping system and corn monoculture with release of *Trichogramma* in corn. Manandhar, R.\* and Wright, M. G. ESA, Reno, Nevada. Nov 13-16, 2011.
13. Cover crop as a habitat manipulation technique to enhance conservation biological control in corn. Manandhar, R.\* and Wright, M. G. CTAHR Symposium, Manoa, Hawaii. April 8-9, 2011.
14. Effects of cover crops on parasitism of *Helicoverpa zea* and occurrence of *Orius* spp. on corn intercropping systems. Manandhar, R.\* and Wright, M. G. PBESA, Kona, Big Island. March 27-30, 2011.
15. Use of strip-till cover crop system to manipulate above and below ground organisms in cucurbit plantings. Wang, K-H.\*, Hooks, C. R. R., Marahatta, S. P. and Manandhar, R. American Phytopathology Society, Charlotte, North Carolina. August 7-11, 2010.
16. Using cover crops to manipulate densities of corn planthoppers and reduce its associated damage symptoms in corn – cover crop intercropping systems. Manandhar, R.\* and Wright, M. G. ESA, San Diego. Dec 9-12, 2010.
17. Effects of cover crops on population densities of corn planthoppers and incidence of Maize mosaic virus (MMV) in corn plantings. Manandhar, R.\* and Wright, M. G. CTAHR symposium, Manoa, Hawaii. April 9-10, 2010.
18. Effects of sunn hemp and marigold living mulches on population densities of thrips and mites in a cucumber agroecosystem. Manandhar, R.\*, Hooks, C. R. R., Wang, K-H. and Wright, M. G. PBESA, Honolulu, Hawaii. Feb 18-19, 2009.
19. Population densities of mixed species of thrips on cucumber in sunn hemp and marigold living mulches agroecosystems. Manandhar, R.\*, Hooks, C. R. R., Wang, K-H. and Wright, M. G. CTAHR Symposium, on April 3-4, 2009 at UH Manoa, Hawaii.
20. Effects of barrier plants on the occurrences of aphid transmitted non-persistent virus in zucchini. Manandhar R.\* and Hooks, C. R. R. CTAHR Symposium, Manoa, Hawaii. April 11-12, 2008.
21. The effects of cover crops and intercrops on nutrient cycling arthropods, weeds, and plant parasitic nematode. Wang, K-H.\*, Hooks, C. R. R. and Manandhar, R. ESA, San Diego, California. Dec 2007.
22. Integrating mixed cropping and living mulches into vegetable production systems. Hooks, C. R. R.\* and Manandhar, R. ESA, San Diego, California. Dec 2007.
23. Evaluation of barrier plants for protecting zucchini from non-persistently aphid transmitted virus. Manandhar, R.\* and Hooks, C. R. R. ESA, San Diego, California. Dec 2007.
24. Preliminary investigation of nematodes inhabiting banana fields in Hawaii and their management options. Wang, K-H.\*, Hooks, C. R. R. and Manandhar, R. Annual Hawaii Banana Industry Association Conference (AHBIAC), Honolulu, Hawaii. August 24, 2007.
25. The virulence of Banana bunchy top virus in banana plants after injection with a bananacide. Hooks, C. R. R.\*, Fukuda, S., Perez, E. A., Kabasawa, D., Wright, M. G., Manandhar, R., Wang, K-H. and Almeida, R. P. P. AHBIAC, Honolulu, Hawaii. August 24, 2007.
26. Comparative susceptibility of banana cultivars Dwarf Brazilian and Williams to Banana bunchy top virus. Hooks, C. R. R.\*, Wright, M. G., Manandhar, R., Perez, E. A., Anhalt, M., Wang, K-H. and Almeida, R. P. P. AHBIAC, Honolulu, Hawaii. August 24, 2007.
27. The influence of Banana bunchy top virus infection on the morphology and growth of banana. Hooks, C. R. R.\*, Wright, M. G., Kabasawa, D., Manandhar, R. and Rodrigo P. P. Almeida, R. P. P. AHBIAC, Hilo, Hawaii August 25, 2006.
28. Cultural management of insect-pests: using barrier crops to protect against non-persistently transmitted virus. Manandhar, R.\* and Hooks, C. R. R. CTAHR Symposium, Manoa, Hawaii. April 1-2, 2005.