**curriculum vitae**

**OF**

**BRENT STEVEN SIPES**

**CREDENTIALS AND EXPERIENCE**

**Degrees Earned and Received**

Baccalaureate B.S. in Agriculture, Plant Protection option, 1983, Purdue University, graduated with distinction.

Master’s M.S. in Plant Pathology, 1987, North Carolina State University. Thesis entitled “Post‑infection development of *Heterodera glycines* as affected by alachlor and fenamiphos” under the direction of Dr. D.P. Schmitt.

Doctoral Ph.D. in Plant Pathology, December 1990, North Carolina State University. Dissertation entitled “Fecundity and viability of parasitic biotypes of *Heterodera glycines*” under the direction of Dr. D.P. Schmitt until March 1990, completed under the direction of Dr. K R. Barker

**Experience**

1991‑1992 Junior Researcher II, University of Hawaii at M\_noa. Responsibilities and accomplishments as a Junior Researcher were 1) Evaluating resistance and tolerance of *Ananas comosus* cultigens to *Rotylenchulus reniformis* and *Meloidogyne javanica*; 2) Conducting a pineapple nematicide program to evaluate new formulations of nematicides, application methods, and efficacy of new compounds; 3) Studying population dynamics of *Rotylenchulus reniformis* in pineapple.

1991 Lecturer, Plant Pathogens and Diseases, University of Hawaii at Manoa. Developed lecture and laboratory exercises for a 4 credit‑hour course to facilitate student comprehension of the principles of plant pathology and the biology of pathogens.

1993‑1998 Assistant Professor of Plant Pathology, University of Hawaii at Manoa. Developed and conducted research on plant‑parasitic nematodes important to Hawaiian agriculture, taught the graduate level nematology course, and advised graduate students.

1998-2003 Associate Professor of Plant Pathology, University of Hawaii at Manoa. Developed and supervised the nematology research program, conducting research on plant‑parasitic nematodes important to Hawaiian agriculture, teaching the graduate level nematology course, and advising graduate students.

2003-present Professor of Plant Pathology, University of Hawaii at Manoa. Responsibilities and duties are to develop and supervise the nematology research program, conduct research on plant‑parasitic nematodes important to Hawaiian agriculture, teach the graduate level nematology course, and advise graduate students.

2004-present Graduate Chair, Tropical Plant Pathology program, University of Hawaii at Manoa. Administering a program of 12 graduate students and 8 graduate faculty, ensuring timely completion of degrees, vetting applicants for admission, mentoring incoming students, conducting annual program assessments.

2010-2012 Chair, Department of Plant and Environmental Protection Sciences, University of Hawaii at Manoa. Administration of an interdisciplinary unit composed of entomologists, plant pathologists, and weed scientists; Responsible for guiding and fostering the development of 30 faculty, 25 graduate students, 27 undergraduate students, and 30 technicians; direct supervision of 9 civil servants.

**HONORS AND AWARDS**

Fellow, 2018. Society of Nematologists.

Ka Pouhana (Mentor) Award, 2005. College of Tropical Agriculture and Human Resources.

Novartis Recognition Award for Excellence, 1998. Society of Nematologists.

**BIBLIOGRAPHY**

**Books Edited**

C. Chan, **B. Sipes**, and T. Lee. 2017. Enabling Agri‑entrepreneurship and Innovation: Empirical Evidence and Solutions for Conflict Regions and Transitioning Economies. 214 pages. CAB International. Oxfordshire, UK.

**Book Chapters**

**B.S. Sipes** and B. Chinnasri. 2018. Nematode parasites of pineapple. *in* Plant-parasitic nematodes in subtropical and tropical agriculture. 3nd edition. R.A. Sikora and J. Bridge, eds. CAB International, Oxfordshire, UK.

**B. Sipes** and A. Pires de Matos. 2018. Pests, Diseases and Weeds. *in* 2018. The Pineapple, 2nd Edition: Botany, Production and Uses. G.M. Sanewsk et al., eds. CAB International.

**B. Sipes** and R. Myers. 2018. Plant-parasitic nematodes in Hawaiian agriculture. *In* Plant parasitic nematodes in sustainable agriculture of North America. Vol. 1 - Canada, Mexico and Western USA. S.A. Subbotin and J.J. Chitambar, eds. Springer. ISBN:978-3-319-99584-7

**B.S. Sipes** and K.‑H. Wang. 2016. Pests, diseases and weeds. Pp. 62-88. *In*: G. Lobo and R.E. Paull (eds). Handbook of Pineapple Technology: Production, Postharvest Science, and Nutrition. John Wiley & Sons, New York, NY.

D. Bartholomew and **B. Sipes**. 2008. Pineapple queen of fruits. Pp. 54-55. *in* Hawaii’s College of Tropical Agriculture and Human Resources: Celebrating the first 100 years. B. Brennan and J. Hollyer, eds. CTAHR, Honolulu, HI.

**B. Sipes**. 2008. Plant Pathology. Pp. 218-219. *in* Hawaii’s College of Tropical Agriculture and Human Resources: Celebrating the first 100 years. B. Brennan and J. Hollyer, eds. CTAHR, Honolulu, HI.

**B.S. Sipes**, E.C. Caswell-Chen, J.-L. Sarah, and W.J. Apt. 2005. Nematode parasites of pineapple. Pp. 709-731. *in* Plant-parasitic nematodes in subtropical and tropical agriculture. 2nd edition. Luc, M., Sikora, R.A., and Bridge,J. eds. CAB International, Oxford.

D.P. Schmitt and **B.S. Sipes**. 2000. Plant-parasitic nematodes and their management. *in* Crop

Nutrient Management in Hawaii’s Soils. Approaches for Tropical and Subtropical Agriculture. J. Silva, ed. College of Tropical Agriculture and Human Resources.

**B.S. Sipes** and D. P. Schmitt. 1998. Nematode‑pesticide interactions. Pp. 173-185 *in* Plant and nematode interactions. K. R. Barker, G. A. Pederson, and G. Windham, eds. American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. Madison, WI.

S.R. Koenning and **B. S. Sipes**. 1998. Biology. Pp. 156-190. *in* Cyst Nematodes. S. B. Sharma, ed. Springer Science & Business Media, 1998.

**B.S. Sipes**. 1992. Genetics. pp. 61‑72. *in* Biology and management of the soybean cyst nematode. R. D. Riggs and J. A. Wrather, eds. St. Paul, MN: American Phytopathological Society Press.

**Refereed Journal Articles** (ordered by year of publication)

J. Marquez, B. Sipes, Z. Cheng, and K.-H. Wang. 2019. Enhancement of indigenous entomophathogenic nematodes by no-till cover cropping with black oat (*Avena strigose*) in a corn (*Zea mays*) agroecosystem. Biological Control submitted January 2019.

Lau, J.-W., S. P. Marahatta, D. Ragone , K.-H. Wang, and **B. S. Sipes**. 2018. Plant-parasitic nematodes associated with breadfruit, *Artocarpus altilis*, in Hawaiʻi. Nematropica 48: accepted in press.

J.-W. Lau, **B.** **Sipes**, K.-H. Wang, S. Marahatta, and D. Ragone. 2018. First report of *Pratylenchus coffeae* on breadfruit (*Artocarpus altilis*) in the United States. Plant Disease 102:1861. doi.org/10.1094/PDIS-02-18-0242-PDN.

A. Pradhan, C. Chan, P.K. Roul, J. Halbrendt, and **B. Sipes**. 2018. Potential of conservation agriculture (CA) as climate smart technology for food security under rainfed uplands of India: A transdisciplinary approach. Agricultural Systems 163:27-35. <http://dx.doi.org/10.1016/j.agsy.2017.01.002>

F.A. Ahmed, **B.S. Sipes**, and A.M. Alvarez. 2017. Postharvest diseases of tomato and natural products for disease management. African Journal of Agricultural Research: 12:684-691. DOI: 10.5897/AJAR2017.12139

C. Chan, **B. Sipes**, A. Ayman, X. Zhang, P. LaPorte, F. Fernandes, A. Pradhan, J. Halbrendt, and P. Roul. 2017. Efficiency of conservation agriculture production systems for smallholders in rainfed uplands of India: A transformative approach to food security. Land 6:58, doi:[10.3390/land6030058](http://dx.doi.org/10.3390/land6030058).

S. Mishra, K.-H. Wang, **B.S. Sipes**, and M. Tian. 2017. Suppression of root-knot nematode by vermicompost tea prepared from different curing ages of vermicompost. Plant Disease 101:734-737. https://doi.org/10.1094/PDIS-07-16-1068-RE

F.A. Ahmed, **B.S. Sipes,** and A.M. Alvarez. 2016. Natural products to control postharvest gray mold of tomato fruit - possible mechanisms. Journal of Plant Pathology and Microbiology 7: 7:7. DOI: 10.4172/2157-7471.1000367.

B. Chinnasri, T. Borsics, D.A. Christopher, and **B.S. Sipes.** 2016. Induction of pathogenesis-related gene 1 (*PR-1*) by acibenzolar-s-methyl application in pineapple and its effect on reniform nematodes (*Rotylenchulus reniformis*). Agriculture and Natural Resources 50:368-373. http://dx.doi.org/10.1016/j.anres.2016.04.008.

A.M. Ortiz, **B.S. Sipes**, S.C. Miyasaka, and A.S. Arakaki. 2015. Green manure crops for management of *Meloidogyne javanica* and *Pythium aphanidermatum*. HortScience 50:1-9.

R.Y. Myers, **B.S. Sipes**, T.K. Matsumoto, C.L. Mello, and J.S. Mello. 2015.

Distribution of Heterorhabditid populations in Hawaii. Nematropica 45:198-207.

K.‑H. Wang, R.Y. Myers, A. Srivastava, and **B.S. Sipes**. 2015. Evaluating the predatory potential of carnivorous nematodes against *Rotylenchulus reniformis* and *Meloidogyne incognita*. Biological Control 88:54‑60. doi:10.1016/j.biocontrol.2015.04.023

B. Kandouh and **B. Sipes**. 2014. Differences among red-skinned potato cultivars and their response to *Meloidogyne* species. Nematropica 44:47-50.

R.Y.M. Cabos, K.‑H. Wang, **B.S. Sipes**, W.P. Heller, and T.K. Matsumoto. 2013. Detection of plant‑parasitic nematode DNA in the gut of predatory and omnivorous nematodes. Nematropica 43:44‑48.

Koon‑Hui Wang, **B.S. Sipes**, W.P. Heller, T.K. Matsumoto, R. Cabos R.Y.M. 2013. Detection of plant‑parasitic nematode DNA in the gut of predatory and omnivorous nematodes. Nematropica 43: 44‑48.

T. Radovich, A. Pant, I. Gurr, N. Hue, J. Sugano, **B. Sipes**, N. Arancon, C. Tamaru, B. Fox, K. Kobayashi, and R. Paull. 2012. Innovative use of locally produced inputs to improve plant growth, crop quality, and grower profitability in Hawai'i. HortTechnology 22:738-742.

S. Aoki, **B. Sipes**, C. Astorga, and C. Nagai. 2012. Resistance of semi‑wild *Coffea arabica* L. from Ethiopia to a root knot nematode, *Meloidogyne konaensis*. Nematropica 42:42:131‑136.

S.P. Marahatta, K.‑H. Wang, **B.S. Sipes**, and C.R.R. Hooks. 2012. Effects of *Crotalaria juncea* on the anhydrobiotic state of *Rotylenchulus reniformis*. Nematropica 42:34‑40.

S.P. Marahatta, K.‑H. Wang, **B.S. Sipes**, and C.R.R. Hooks. 2012. Effects of the integration of sunn hemp and soil solarization on plant‑parasitic and free‑living nematodes. Journal of Nematology 44:72–79.

S.P. Marahatta, K.‑H. Wang, **B.S. Sipes**, and C.R.R. Hooks. 2012. Effects of *Tagetes patula* on active and inactive stages of root‑knot nematodes. Journal of Nematology 44:26–30.

R.Y.M. Cabos, **B.S. Sipes**, C. Nagai, M. Serracin and D.P. Schmitt. 2010. Evaluation of coffee genotypes for root-knot nematode resistance. Nematropica 40:191‑202.

S.P. Marahatta, K.‑H. Wang, **B.S. Sipes**, and C.R.R. Hooks. 2010. Strip‑till cover cropping for managing nematodes, soil microarthropods and weeds in a bitter melon agroecosystem. Journal of Nematology 42:111-119.

C. Rabovich, R. Paull, and **B. Sipes**. 2009. Protease inhibitors and reproduction of reniform nematode in pineapple. Annals of Applied Biology 154:127-134.

M.‑L. Wang, G. Uruu, L. Xiong, X. He, C. Nagai, K.T. Cheah, J.S. Hu, G.‑L. Nan, **B.S. Sipes**, H.J. Atkinson, P.H. Moore, K.G. Rohrbach, R.E. Paull. 2009. Production of transgenic pineapple (*Ananas cosmos* (L.) Merr.) plants via adventitious bud regeneration. In Vitro Cellular and Developmental Biology ‑ Plant 45:112-121.

S.N. Ami and **B.S. Sipes**. 2008. Low-risk and sustainable compounds for controlling root-knot nematode. Nematologia Mediterranea 36:57-60.

B. Chinnasri, T. Borsics, D.A. Christopher, and **B.S. Sipes**. 2008. Induction of pathogenesis‑related gene 1 (PR‑1) by acibenzolar‑s‑methyl application in pineapple and its effect to reniform nematode (*Rotylenchulus reniformis*). ScienceAsia: submitted.

A.M. Ortiz, S.C. Miyasaka, J.J. Cho, and **B.S. Sipes**. 2008. Resistance and tolerance to *Meloidogyne javanica* in *Colocasia esculenta* from Thailand, Vietnam, and Nepal. International Journal of Nematology 18:66-70.

K.‑H. Wang, **B. S. Sipes**, D. P. Schmitt, A. E. MacGuidwin, M. McKenry, T. Bliss, B. R. Kerry, and S. Costa. 2008. Plant nematological contributions to Phytopathology. APSnet Feature November 2008. http://www.apsnet.org/online/feature/nematology/.

B. Chinnasri, **B.S. Sipes**, and D.P. Schmitt. 2006. Effects of inducers of systemic acquired resistance on reproduction of *Meloidogyne javanica* and *Rotylenchulus reniformis* in pineapple. Journal of Nematology 38:319-325.

J.K. Leary, J. DeFrank, O. Kawabata, and **B. Sipes**. 2006. Tropical eggplant *(Solanum melongena* L.) production with a buffelgrass (*Pennisetum ciliare* L.) living mulch system in Hawaii. Biological Agriculture and Horticulture 24:105-116.

A. Arcinas, **B.S. Sipes**, A.H. Hara, and M.M.C. Tsang. 2005. Effect of conditioning treatments on the survival of *Radopholus similis* at high temperatures. Journal of Nematology 37:250-253.

M. Mankowski, H.K. Kaya, K. Grace, and **B. Sipes**. 2005. Differential susceptibility of subterranean termite castes to entomopahtogenic nematodes. Biocontrol Science and Technology 15:367-377.

**B.S. Sipes**, D.P. Schmitt, K. Xu, and M. Serracin. 2005. Esterase polymorphism in *Meloidogyne konaensis.* Journal of Nematology 37:438-443.

G. Taniguchi, T. Thompson, and **B. Sipes**. 2005. Control of the big-headed ant, *Pheidole megacephala* (Hymenoptera:Formicidae) in pineapple cultivation using Amdro in bait stations. Sociobiology 45:1-7.

A.C. Arcinas, **B.S. Sipes**, A.H. Hara, and M.M.C. Tsang. 2004. Hot water drench treatments for the control of *Radopholus similis* in rhapis and fishtail palms. HortScience 39:578-579.

D. Hurchanik, D.P. Schmitt, N.V. Hue, and **B.S. Sipes**. 2004. Plant nutrient partioning in coffee infected with *Meloidogyne konaensis*. Journal of Nematology 36:76-84.

M.M.C. Tsang, A.H. Hara, **B.S. Sipes**. 2004. Efficacy of hot water drenching of *Anthurium andraeanum* plants against the burrowing nematode *Radopholus similis* and plant tolerance to heat. Annals of Applied Biology 145:309-316.

D.G. Alston, **B.S. Sipes**, J. Uchida, C.L. Chia, and D.P. Schmitt. 2003. Inter-cycle cover crops for management of plant parasitic nematodes and root-rotting organisms in papaya. International Journal of Nematology 13163-172.

D. Alston, **B. Sipes**, J. Uchida, D. Schmitt, and L. Chia. 2003. Interactive effects of *Rotylenchulus reniformis* and *Phytothora palmivora* on papaya (*Carica papaya* L.) survival and growth in greenhouse pots. Nematropica 33:69-81.

B. Chinnasri, **B.S. Sipes**, and D.P. Schmitt. 2003. Effect of acibenzolar-s-methyl application on *Rotylenchulus reniformis* and *Meloidogyne javanica*. Journal of Nematology 35:110-114.

D. Hurchanik, D.P. Schmitt, N.V. Hue, and **B.S. Sipes**. 2003. Relationship of *Meloidogyne konaensis* population densities to nutritional status of coffee roots and leaves. Nematropica 33:51-60.

M.M.C. Tsang, A.H. Hara and **B.S. Sipes**. 2003. Hot-water treatments of potted palms to control burrowing nematode, *Radopholus similis*. Crop Protection 22:589‑593.

K.-H. Wang, **B.S. Sipes**, and A.R. Kuehnle. 2003. Relationship between burrowing nematode resistance and tolerance and anthurium nutrient concentration. Proceedings of the Soil and Crop Science Society of Florida 62:82-85.

K. H. Wang, **B. S. Sipes**, and D. P. Schmitt. 2003. Enhancement of *Rotylenchulus reniformis* suppressiveness by *Crotalaria juncea* amendment in pineapple soils. Agriculture, Ecosystems and Environment 94:197-203.

D. J. Fallon, H. K. Kaya, and **B. S. Sipes**. 2002. Effect of entomopathogenic nematodes on *Meloidogyne javanica* o tomatoes and soybeans. Journal of Nematology 34:239-245.

**B. S. Sipes** and J. S. Lichty. 2002. *Radopholus similis* damage to *Anthurium andraeanum*. Nematropica 32:77-81.

**B. S. Sipes**, D. M. Sether, and J. S. Hu. 2002. Interactions between *Rotylenchulus reniformis* and *Pineapple mealybug wilt associated virus-1* in pineapple. Plant Disease 86:933-938.

K. H. Wang, **B. S. Sipes**, and D. P. Schmitt. 2002. *Crotalaria* as a cover crop for nematode management: a review.Nematropica 32:35-57.

K. H. Wang, **B. S. Sipes**, and D. P. Schmitt. 2002. Management of *Rotylenchulus reniformis* in pineapple, *Ananas comosus*, by intercycle cover crops. Journal of Nematology 34:106-114.

R. Jin, **B. Sipes**, and D. Borthakur. 2001. Reproduction of *Heterodera* *schachtii* on Bt-transgenic cabbage. Russian Journal of Nematology 9:137-138.

**B. S. Sipes**. 2001. Spatial pattern of *Radopholus similis* in the roots and shoots of *Anthurium andraeanum.* Nematropica 31:113-118.

M. M. C. Tsang, A. H. Hara and **B. S. Sipes**. 2001. A hot water drenching system for disinfesting roots and media of potted palms of the burrowing nematodes. Applied Engineering in Agricultural 17:533-538.

K. H. Wang, **B. S. Sipes**, and D. P. Schmitt. 2001. Suppression of *Rotylenchulus reniformis* by *Crotalaria juncea*, *Brassica napus*, and *Tagetes erecta*. Nematropica 31:235-249.

M.Y.C., Goo and **B. S. Sipes**. 1999. Chromosome number and reproduction of isolates of *Radopholus similis* from Hawaii. International Journal of Nematology 9:43-46.

**B. S. Sipes**, A. S. Arakaki, D. P. Schmitt, and R. T. Hamasaki. 1999. Root-knot nematode management in tropical cropping systems with organic products. Journal of Sustainable Agriculture 15:69-76.

K. H. Wang, **B. S. Sipes**, and A. Kuehnle. 1999. *Radopholus similis* in *Anthurium* shoot tissue. HortScience 34:296-297.

K. H. Wang, A. R. Kuehnle, and **B. S. Sipes**. 1998. In vitro tolerance and resistance to burrowing nematode, *Radopholus similis*, in *Anthurium* species. Euphytica 103:23-28.

B. Chinnasri, J. H. Moy, **B. S. Sipes**, and D. P. Schmitt. 1997. Effect of gamma‑irradiation and heat on root‑knot nematode, *Meloidogyne javanica*. Journal of Nematology 29:30-34.

M. Y. C. Goo and **B. S. Sipes**. 1997. Host preference of *Radopholus citrophilus* from Anthurium in Hawaii among selected ornamentals. HortScience 32:1237‑1238.

M. P. Ko, D. P. Schmitt, H. Fleisch, and **B. S. Sipes**. 1997. Re-establishment and resurgence of plant-parasitic nematodes in fumigated pineapple fields at different elevations and irrigation regimes in Hawaii. Australasian Plant Pathology 26:60-68.

**B. S. Sipes** and A. Arakaki. 1997. Root-knot nematode control in dryland taro with tropical cover crops. Journal of Nematology (Supplement) 29:721-724.

K. H. Wang, A. R. Kuehnle, and **B. S. Sipes**. 1997. In vitro screening for burrowing nematode, *Radopholus citrophilus*, tolerance and resistance in commercial *Anthurium* hybrids. In Vitro Cell Developmental Biology 33:205-208.

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M. P. Ko, D. P. Schmitt, and **B. S. Sipes**. 1996. Axenizing and culturing endomigratory plant‑parasitic nematodes using Pluronic® F‑127, including its effects on population dynamics of *Pratylenchus.* Journal of Nematology 28:115-123.

**B. S. Sipes**. 1996. Control of *Rotylenchulus reniformis* in pineapple with fosthiozate. Fruits 51:173-177.

**B. S. Sipes** and K. M. Delate. 1996. Potential biologically-based nematicides for control of anthurium decline. Nematropica 26:171-175.

M. P. Ko, E. C. Bernard, D. P. Schmitt, and **B. S. Sipes**. 1995. Occurrence of *Pasteuria*‑like organisms on selected plant‑parasitic nematodes of pineapple in the Hawaiian Islands. Journal of Nematology 27:395‑408.

R. C. Schneider, R. E. Green, J. D. Wolt, R. C. Loh, D. P. Schmitt, and **B. S. Sipes**. 1995. 1,3-Dichloropropene distribution in soil when applied by drip irrigation or injection in pineapple culture. Pesticide Science 43:97‑105.

R. C. Schneider, **B. S. Sipes**, C. H. Oda, R. E. Green, and D. P. Schmitt. 1995. Management of 1,3‑dichloropropene in pineapple for efficacy and reduced volatile losses. Crop Protection 14:611-618.

**B. S. Sipes**, S. C. Nelson, and A. Arakaki. 1995. *Meloidogyne javanica* damage to dryland taro cultivars. Afro‑Asian Journal of Nematology 5:141-147.

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**B. S. Sipes** and D. P. Schmitt. 1994. Evaluation of pineapple, *Ananas comosus*, for host‑plant resistance and tolerance to nematodes. Nematropica 24: 113‑121.

**B. S. Sipes** and D. P. Schmitt. 1994. Population fluctuations of *Rotylenchulus reniformis* and its effects on pineapple yields. Plant Disease 78:895‑898.

**B. S. Sipes** and D. P. Schmitt. 1993. Preplant and postplant reniform nematode control in pineapple. Fungicide and Nematicide Tests 49:183.

**B. S. Sipes**, D. P. Schmitt, and C. Oda. 1993. Comparison of single and double chisel injection methods for the control of *Rotylenchulus reniformis* in pineapple. Supplement to the Journal of Nematology (Annals of Applied Nematology) 25:773‑777.

**B. S. Sipes**, D. P. Schmitt, and K. R. Barker. 1992. Fitness components and selection of biotypes of *Heterodera glycines*. Journal of Nematology 24:415‑424.

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**B. S. Sipes** and D. P. Schmitt. 1989. Effect of planting date, alachlor, and fenamiphos on *Heterodera glycines* development. Journal of Nematology 21 :33‑41.

**B. S. Sipes** and D. P. Schmitt. 1989. Development of *Heterodera glycines* as affected by alachlor and fenamiphos. Journal of Nematology 21:24‑32.

**Invited Conference Presentations**

R.Y.M. Cabos, **B.S. Sipes**, C. Nagai, M. Serracin, and D.P. Schmitt. 2012. Host plant resistance for nematode control in coffee. 51st Annual Meeting of the Society of Nematologists. Savannah, GA.

**B. Sipes.** 2008. Disinfecting planting material of nematodes. Fifth International Nematology Congress. Brisbane Australia.

**B. Sipes.** 2007. N.A. Cobb. Hawaii-Australia Pacific Pathways History Conference, sponsored by the Australian Consulate-General Honolulu.

**B. Sipes** and J. Uchida. 2006. Sustainable control of soil-borne pathogens with cover crops Hawaii Conservation Alliance Meeting.

**B.S. Sipes**. 2003. Hawaiian cut flowers and their nematode problems. Organization of Tropical Nematologists of America Annual Meeting.

D. Alston, **B. Sipes**, J. Uchida, D. Schmitt, and L. Chia. 2002. Interactions between nematodes and *Phytophthora* in papaya. Hawaii Papaya Growers Industry Association Annual Meeting.

D.P. Schmitt and **B.S. Sipes**. 2004. Nematode management in crops grown in North America

and Hawaii. in Nematology Monographs and Perspectives 2. Proceedings of the Fourth International Nematology Congress. R. Cook and D.J. Hunt, eds.

**B. S. Sipes**. 2000. Cover crops for nematode control. Cover crops for sustainable agriculture. CTAHR Conference.

**B.S. Sipes** and K.-H. Wang. 2000. Sustainable nematode control in Hawaiian pineapple.

Organization of Tropical Nematologists of America Annual Meeting.

J. H. Moy, B. Chinnasri, D. P. Schmitt, **B. S. Sipes**, A. H. Hara, R. T. Hamasaki, E. F.

Mersino, R. M. Yamakawa, X. Bien, R. Chung, and J. Yalemar. 1998. Radiation disinfection or disinfestation of nematode, aphids, mites, thrips, and other pests on food plant materials – Effectiveness and product quality. International Atomic Energy Association.

J. H. Moy, B. Chinnasri, **B.S. Sipes**, D.P. Schmitt, R. T. Hamasaki, E. F. Mersino, and R. M. Yamakawa. 1996. Radiation disinfection or disinfestation of nematode, aphids, mites, thrips, and other pests on food plant materials - effectiveness and product quality.

R.C. Schneider, R. E. Green, and **B.S. Sipes**. 1996. Fenamiphos persistence in a Hawaii oxisol: field and laboratory experiments. Third International Nematology Congress.

**B. S. Sipes**. 1996. Reniform nematodes in paradise. Third International Nematology Congress.

D.P. Schmitt, **B.S. Sipes**, and M.P. Ko. 1993. Economically important nematodes on pineapple and their management. American Phytopathological Society, Society of Nematologists Joint Annual Meeting.

**B.S. Sipes**. 1993. Controlling nematodes in bananas. Proceedings of the Twenty-fifth Annual Hawaii Banana Industry Association Conference.

**Conference and Symposium Proceedings**

C. Chan, A. Abouzeid, **B. Sipes**, A. Pradhan, J. Halbrendt, and P. Roul. 2017. Efficient Resource Use Analysis to Counter Climate Change on Agricultural Sustainability in Tribal Villages in India. Interdisciplinary Social Sciences Research Network Conference. Hiroshima, Japan.

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**GRANTS**

**Extramural Grants**

K. Chan and **B. Sipes**. 2018-2019. Mint: A Living Mulch Income Enhancer. Western SARE (Project No. FW18-052, $20,000).

C. Martiney and **B. Sipes**. 2018-2019. Conservation Biological Control of Coffee Berry Borer by Applying Nitrogen Fixing Tree Mulch to Enhance Indigenous Entomopathogenic Nematodes. Western SARE ($20,000).

**B. Sipes** and M. Melzer. 2018-2019. Bolaug Fellowship Program – South Africa. USDA FAS ($39,998).

C. Chan, **B. Sipes**, and M. Loke. 2016. Cochran Fellowship - Albania Fruits and Vegetables. USDA Foreign Agricultural Service ($43,300).

**B.S. Sipes**, H. Melakeberhan, C. Chan, A. Sanchez‑Perez, and A. Sacbajá. Integrated and Scalable Nematode‑Soil Health Management for Smallholder Potato Farming Systems. 2016-2019. USAID Horticulture Innovation Lab ($500,000).

C. Chan‑Halbrendt, **B. Sipes**, T. Idol, S. Grey, T. Masuda, and P. Roul. 2014-2015. Belmont Forum Collaborative Research: Sustainable Management of Agro‑ecological Resources for Tribal Societies 2 (SMARTS2). National Science Foundation ($299,894).

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K.‑H. Wang, L. Kaufman, **B.S. Sipes**, T. Radovich, and J. Sugano. 2010‑2012. An innovative cover cropping system for organic cucurbit growers in Hawaii: From nematode and pickleworm management, improvement of pollinator habitat to soil conservation. NRCS CIG ($75,000).

K.‑H. Wang, **B.S. Sipes**, J. Uchida, and J. Sugano. 2010‑2012. Reducing pesticide applications for nematodes, Fusarium wilt, and weeds by soil solarization in Hawaii. EPA ($100,000).

K.‑H. Wang, C.R.R. Hooks, **B.S. Sipes**, J. Sugano, and A. Arakaki. 2010‑2012. Using conservation tillage and cover crop mixtures to enhance natural enemies of nematode pests. TSTAR ($160,902).

**B.S. Sipes**. 2010-2011. Borlaug Global Alliance Fellow - Ghana. USDA, FAS ($29, 194).

**B.S. Sipes**, T. Radovich, K.-H. Wang, and J. Leary. 2010-2011. Promoting adaptive management with “Tropic Sun” sunn hemp (*Crotolaria juncea*) in Hawaii for ecological strategices in weed control, nematode suppression, and nutrient management. WSARE ($54,000).

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T.J.K. Radovich, R. Paull, **B. Sipes**, J. Uchida, N. Aracon, and K. Flemming. 2009-2012. Vermicompost‑based media to Enhance Organic Vegetable Seedling Vigor, Yield, Crop Quality and Grower Profitability. USDA NRI Organic Agriculture ($351,028).

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C.R.R Hooks, K.-H. Wang, and **B.S. Sipes**. 2007-2009. Solarization and Cover Crop as Alternatives to Soil Fumigants for Hawaii Pineapple Growers. Environmental Protection Agency, Region 9 ($89,996).

C.R.R. Hooks, K.‑H. Wang, **B.S. Sipes**, and J.S. Sugano. 2007-2008. Providing banana stakeholders with essential information for the management of plant-parasitic nematodes, Hawaii Farm Bureau ($48,720).

D. Fallon, C. Hooks, and **B. Sipes**. 2006-2007. Pickleworm control in Cucumber, Zucchini, and Kabocha squash. Hawaii Department of Agriculture ($24,500).

C. Hooks, K.H. Wang, A. Ploeg, and **B. Sipes**, 2006-2009. Using cover crops to build an ecologically based pest management program for vegetable production. USDA Crops at Risk ($434,120).

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M. Kawate, **B. Sipes**, C. Tarutani‑Weissman, and J. Deputy. 2005-2009. Decision support systems to identify and prioritize pest management needs for turf, cucurbits and potted orchids. USDA‑CSREES Special Grants, Section 406 ($180,000).

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G. Tanuguchi and **B.S. Sipes**. 2005-2006. The study of *Phytophthora* spp. and *Pythium* spp. and their roles in pineapple root rot diseases. Hawaii Department of Agriculture ($67,912).

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D. Fallon, B.S. Sipes, and H. Kaya. 2004-2007. Rhabditid nematodes and antagonists in suppression of plant-parastic nematodes. USDA‑CSRS Special Grants, Section 406 ($181,924).

C. Nagai, **B.S. Sipes**, and R. Myer-Cabos. 2004-2005. Engineered resistance to rootknot nematodes in coffee. HARC ($17,530).

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**B.S. Sipes** and S. Schenck. 2004-2005. Biocontrol of anthurium decline caused by *Radopholus similis*. EDAH CPD ($17,400).

S.C. Myasaka, J.L. Cho, R.R. Ming, A.S. Arakaki, J. DeFrank, and **B.S. Sipes**. 2003-2006. Cropping systems to control tropical soil-borne pests in dryland-grown taro. Western Regional Sustainable Agricultural Research and Education, United States Department of Agriculture ($257,827).

K. Sewake, **B. Sipes** and J. Lichty. 2003-2005. Chemical and cultural management of burrowing nematodes on anthuriums – Phase II. USDA‑CSREES Special Grants, Floriculture ($52,166).

K.T. Sewake and **B. Sipes**. 2003-2004. Chemical and cultural management of burrowing nematodes on anthuriums – Phase 1. Hawaii County ($7,800).

**B.S. Sipes**. 2003-2004. Evaluation of the systemic acquired resistance intermediates PABA and Benzol for nematode control on pineapple. Hawaii Department of Agriculture ($20,000).

**B.S. Sipes** and A.R. Kuehnle. 2003-2006. Burrowing and lesion nematode control via transplastomic expression of protease inhibitors. USDA‑CSRS Special Grants, Section 406 ($121,924).

A.R. Kuehnle and **B.S. Sipes**. 2002-2003. Genetic resistance to burrowing nematode in anthurium. Hawaii Department of Agriculture ($40,000).

D.P. Schmitt and **B.S. Sipes**. 2002-2003. Coffee growth in *Meloidogyne konaensis* infested soil in response to root and stem pruning. Hawaii Department of Agriculture ($9,000).

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**B.S. Sipes** and D.P. Schmitt. 2002‑2005. Evaluation of systemic acquired resistance for nematode control in pineapple. Hawaii Department of Agriculture ($20,700).

**B.S. Sipes** and D.P. Schmitt. 2002‑2005. Pineapple nematode management. Hawaii Department of Agriculture ($22,678).

R. Bowen, A. Arakaki, J. DeFrank, R. Ebesu, H. Valenzuela, **B. Sipes**, M. Johnson. 2001-2003 Sustainable pest control for the tropics. USDA Western Region SARE ($91,548).

A.R. Kuehnle and **B.S. Sipes**. 2001. Novel pest management strategy using transplastomic plants. USDA-ARS Minor Crops Pest Control Research Program ($81,242).

**B.S. Sipes** and D.P. Schmitt. 2001-2002. Telone II EC phytotoxicity to pineapple. Hawaii Department of Agriculture, Pesticide Use Revolving Fund ($5,859).

**B.S. Sipes** and D.P. Schmitt. 2001-2002. ABR011500-1, a replacement for methyl bromide. Hawaii Department of Agriculture, Pesticide Use Revolving Fund ($16,798).

A. Hara, **B.S. Sipes**, and M. Tsang. 2000-2003. Thermotherapy of tropical plants – A nonchemical approach to phytosanitation and plant vigor. USDA‑CSRS Special Grants, Section 406 ($185,845).

K.G. Rohrbach, P. Moore, C, Nagai, D. Christopher, R. Paull, **B. Sipes**, J. Hu, and C. Oda. 2000-2005. Genetic engineering of pineapple for nematodes and disease resistance, and improved fruit quality. USDA ($1,000,000).

D.P. Schmitt and **B.S. Sipes**. 2000-2001. Evaluation of molassess as a soil amendment to stimulate growth of rootknot nematode infected coffee. Department of Agriculture ($10,000).

**B.S. Sipes** and D.P. Schmitt. 2000‑2003. Field evaluation of transgenic pineapple plants for nematode resistance. Hawaii Department of Agriculture ($20,000).

**B.S. Sipes** and D.P. Schmitt. 2000‑2003. Optimization of nematode control in pineapple. Hawaii Department of Agriculture ($37,358).

**B.S. Sipes**, A. Hara, and M. Tsang. 2000-2001. Burrowing nematode control in anthurium-cehmical and cultural alternatives. Hawaii Department of Agriculture ($45,592).

**B.S. Sipes**, C. Nagai, and D.P. Schmitt. 2000-2003. Engineered Resistance to Root-knot Nematodes in Coffee. USDA‑CSRS Special Grants, Section 406 ($147,500).

D.G. Alston, **B.S. Sipes**, J.Y. Uchida, and C. Leng Chia. 1999-2000. Demonstration of cover crops for management of plant-parasitic nematodes and fungi in Hawaii papaya. American Farmland Trust ($10,000).

A. Hara, C. Jacobsen, **B. Sipes**, and D. Sato. 1999-2000. Non‑Chemical approaches for reducing plant-parasitic Nematodes in Infected Farmland. American Farmland Trust ($9,000).

N. Hue, D.P. Schmitt, H.C. Bittenbender, **B.S. Sipes**, and R. Green. 1999-2001. Optimizing the soil environment for coffee growth. USDA‑CSRS Special Grants, Section 406 ($182,222).

**B.S. Sipes**. 1999‑2001. Greenhouse evaluation of transgenic pineapple plants for nematode resistance. Hawaii Department of Agriculture ($33,000).

**B.S. Sipes**. 1999‑2001. Rootknot and reniform nematode control in pineapple — Alternatives to Nemacur and Telone II. American Farmland Trust ($10,000).

**B.S. Sipes** and R. Paull. 1999‑2001. Nematode control for pineapple. Hawaii Department of Agriculture ($33,316).

**B.S. Sipes**. 1998‑99. Evaluation of DiTera against plant-parasitic nematodes in Hawaii. American Farmland Trust ($10,000).

**B.S. Sipes**. 1997‑98. Development and evaluation of nematode controls in pineapple. Hawaii Department of Agriculture ($51,400).

**B.S. Sipes** and A. Hara. 1997-98. Hot water for control of nematodes in potted foliage plants. Hawaii Department of Agriculture ($2,000).

**B. Sipes**, C. Evensen, and J. Uchida. 1997-99. Turmoil in the Tropics: Current Environmental and Agricultural Issues. USDA Higher Education Challenge Grants Program ($71,814).

**B.S. Sipes**, H.K. Kaya, and R. Gauger. 1997‑98. A biologically-based approach to control plant-parasitic nematodes. USDA‑CSRS Special Grants, Section 406 ($151,929).

D.P. Schmitt, E.P. Caswell-Chen, H. Ferris, **B.S. Sipes**, and R. Shimabuku. 1996-99. Genetics, infectivity, and damage potential of the sugar beet cyst nematode. USDA‑CSRS Special Grants, Section 406 ($143,000).

**B.S. Sipes**. 1996‑97. Burrowing nematode management in Anthurium production. Hawaii Department of Agriculture ($6,000).

**B.S. Sipes**. 1996‑97. Pineapple nematode management strategies. Hawaii Department of Agriculture ($51,400).

**B.S. Sipes** and B. Brennan. 1996. Hawaiian pineapple pesticide use survey and assessment. Western Regional PIAP ($18,170).

K.G. Rohrbach, P. Moore, C, Nagai, S. Sun, R. Paull, **B. Sipes**, J. Hu, and C. Oda. 1995-99. Genetic engineering of pineapple for nematodes and disease resistance, and improved fruit quality. USDA ($1,000,000).

A. Kuehnle, J. Imamura‑Lichty, H. Kamemoto, **B. Sipes**, M. Aragaki, and J. Kunisaki. 1994-98. Production of new, novel and desirable *Anthurium* cultivars. Federal Floriculture Research Grant

($269,368).

**B.S. Sipes**. 1994‑95. Alternative controls for nematodes in cut flower crops. Governor's Agricultural Coordinating Committee ($16,400).

**B.S. Sipes**. 1994‑95. Evaluation of fumigant and nonvolatile nematicides for control of reniform and rootknot nematodes on pineapple. Governor's Agricultural Coordinating Committee ($49,500).

**B.S. Sipes** and M.P. Ko. 1994‑96. Ecology and biology of *Pasteuria* spp. in the Hawaii Islands and their potential for biological control of plant‑parasitic nematodes in the tropics. USDA‑CSRS Special Grants, Section 406 ($157,000).

**B.S. Sipes**. 1993‑94. Evaluation of fumigant and nonvolatile nematicides for control of reniform and rootknot nematodes on pineapple. Governor’s Agricultural Coordinating Committee ($17,592).

**B.S. Sipes**. 1993‑94. Development of *Meloidogyne javanica* resistance in taro. Homai Ka Ike Grants ($2,000).

D.P. Schmitt and **B.S. Sipes**. 1992‑93. Evaluation of fumigant and nonvolatile nematicides for control of reniform and rootknot nematodes on pineapple. Governor’s Agricultural Coordinating Committee ($43,650).

D.P. Schmitt and **B.S. Sipes**. 1992‑93. Development of management strategies to minimize the use of chemical nematicides for controlling plant‑parasitic nematodes on pineapple. Governor’s Agricultural Coordinating Committee ($65,950).

**Intramural Grants**

**B. Sipes**, H. Spafford, and K.-H. Wang. 2012. A 21st Century Classroom for Plant and Environmental Protection Sciences Learners. CTAHR Capacity Improvement ($22, 100).

J. Uchida and **B. Sipes**. 2012. Distance delivered course in Environmental Sciences. CTAHR Capacity Improvement ($45, 540).

**B.S. Sipes,** H. Spafford, and Y. Cho. 2011. Microscopes for use in the PEPS introductory entomology, plant pathology and weed science courses. Upgrade CTAHR Instructional Program ($10,000).

**B.S. Sipes**. 1994‑97. Genetic variability in the cyst and rootknot nematodes. CTAHR Minigrant Program ($60,000).

**B.S. Sipes** and J. DeFrank. 1997-98. Use of cover crops and biofumigation for plant-parasitic nematode control in pineapple: an on-farm demonstration. State IPM Program ($2,500).

**Grants from Companies**

Valent BioSciences. 2002. Support of nematode control in tropical agriculture ($5,000).

DowElanco. 1998. Support of nematode control in tropical agriculture ($8,000).

DowElanco. 1997. Support of nematode control in tropical agriculture ($8,000).

DowElanco. 1996. Support of nematode control in tropical agriculture ($8,000).

Pineapple Growers Association of Hawaii. 1996. Support of nematode control in pineapple ($12,800).

DowElanco. 1995. Support of nematode control in tropical agriculture ($4,000).

DowElanco. 1994. Support of nematode control in tropical agriculture ($12,000).

ICI America. 1992. Support of nematode control in tropical agriculture ($2,000).

ISK Biotech. 1992. Support of nematode control in tropical agriculture ($10,000).

DowElanco. 1991. Support of nematode control in tropical agriculture ($12,000).

**Hawaii Agricultural Experiment Station Projects**

**B.S. Sipes**. 2013-2018. W3186: Variability, Adaption, and Management of Nematodes Impacting Crop Production and Trade. Project HAW09026‑R.

**B.S. Sipes,** Z. Cheng, and K.-H. Wang. 2013-2018. Management of plant-parasitic nematodes in tropical agro-ecosystems. Project HAW09027‑H.

**B.S. Sipes**. 2008-2013. W2186. Variability, Adaption, and Management of Nematodes Impacting Crop Production and Trade. Project HAW00996‑R.

**B.S. Sipes**, R.H. Ebesu, G.I. Teves, and G.Y. Taniguchi.2008-2013. Pineapple cultivation and production in Hawaii. Project HAW00952‑H.

**B.S. Sipes**. 2003-2008. Tropical plant nematology-biology and control. Project HAW00980‑H.

**B.S. Sipes**. 2003-2008. Genetic variability in the cyst and rootknot nematodes. Project No. HAW00917‑R.

**B.S. Sipes**, R.H. Ebesu, G.I. Teves, and G.Y. Taniguchi.2003-2008. Pineapple cultivation and production in Hawaii. Project HAW00943‑H.

Kuehnle A., J. Uchida, J. Lichty, J. Kunisaki, and **B. Sipes**. 2002-2008. Breeding aroids for quality, productivity, and disease/pest resistance with emphasis on anthurium. Project HAW00841‑H.

**B.S. Sipes**, D.P. Schmitt, and J.B. Friday. 2001-2004. Characterization of host suitability of forest tree species to plant-parasitic nematodes. Project HAW00924‑M.

S.C. Nelson, **B. Sipes**, and A. Hara. Extension publications for tropical diseases and pests of

diversified crops in Hawaii. Project No. 16-923.

K. Rohrbach, M. Johnson, **B. Sipes**, R. Mau, J. Hu, and R. Paull. Pineapple integrated pest management. Project No. 733-H.

D.P. Schmitt and **B.S. Sipes**. Utility of biology of plant-parasitic nematodes in the tropics for developing management strategies. Project No. 761-H.

**B.S. Sipes** and D.P. Schmitt. Genetic variability of the cyst and root-knot nematodes. Project

No. 707-R.

**B.S. Sipes**, D.P. Schmitt, and S.C. Nelson. Nematode Control for tropical crops in Hawaii.

Project No. 16-925

**ENDEAVORS**

**Chairman of Thesis and Dissertation Committee**

Abdul Alhussaini Ph.D. Current.

Ismet Acar M.S. 2019. Current. Enhancing biological insect control: Protecting

entomopathogenic nematodes against UV radiation and dehydration.

Abdul Alhussaini M.S. 2018. Identification and biological control potential of bacterial symbionts from an entomopathogenic *Oscheius*.

Lilly Fatdal M.S. 2017. Nonthesis Plan B option.

Jin-Wah Lau M.S. 2017. Plant-parasitic nematodes associated with breadfruit, *Artocarpus altilis* (Parkinson) Fosberg. Co-Chair with Sharadchandra Marahatta.

Justin Bisel M.S. 2016. Potential of endemic entomopathogenic nematodes against emerging insect pests in Hawai‘i. Co-Chair with Roxana Myers.

Kevin Chan M.S. 2016. *Mentha spicata* - A potential cover crop for tropical conservation agriculture.

Philip Waisen M.S. 2015. The effect of spirotetramat applied against reniform nematode, *Rotylenchulus reniformis,* on pineapple, *Ananas comosus*, and tomato, *Solanum lycopersicum*.

Basil Kandouh M.S. 2012. Susceptibility and tolerance in red-skinned potato *(Solanum tubersosum* L.) to root-knot nematode, *Meloidogyne* spp.

Rafid Mohammed M.S. 2012. Biological control of imported cabbageworm (*Pieris rapae*) with *Steinernema feltiae.*

I-Chin Wang Ph.D.2012. Developing a qPCR-based molecular technique for nematode community analysis.

Yoshimi Makimoto MS. 2011. Anthurium blight and burrowing nematodes.

Sayaka Aoki MS. 2009. Resistance of Semi‑wild *Coffea arabica* L. from Ethiopia to the Kona Coffee Root‑Knot Nematode, *Meloidogyne konaensis*.

Michael Berry M.S. 2008. Withdrew from school.

Tonia Quintero Ph.D. 2008. Assessment of four soil nematode communities in Hawaii by different methods.

Roxana Myers Cabos Ph.D. 2007. Transformation of coffee for resistance to nematodes.

Tridate Khaithong Ph.D. 2007. Transplastomic expression of proteinase inhibitors and resistance to migratory endoparasitic nematodes.

Buncha Chinnasri Ph.D. 2006. Effect of chemical inducers of systemic acquired resistance (SAR) on *Rotylenchulus reniformis* and *Meloidogyne javanica* in pineapple.

Anthony Ortiz M.S. 2005. Cover crops for rootknot nematode control in dryland taro.

Andrea Blas PhD. 2004. Transferred to Molecular Biosciences and BioEngineering.

Mario Serracin Ph.D. 2003. Committee Co-chairman, Soil pore size distribution and soil water potential as factors in the activity and pathogenicity of *Meloidogyne konaensis* to *Coffea arabica*.

Albert Arcinas M.S. 2002. Efficacy of hot water immersion treatments in the control of plant-parasitic nematodes in tropical potted flowers and foliage.

Cheryll Kelly M.S. 2002. Committee Co-chairman, The effect of pineapple protease inhibitors and reniform nematode.

Kai Mei Xu M.S. 2002. Importance of esterase phenotype changes in *Meloidogyne konaensis*.

Koon Hui Wang Ph.D. 2000. Management of reniform nematode, *Rotylenchulus reniformis*, in pineapple with tropical cover crops.

Matthew Goo M.S. 1995. Phenotypic assessment of *Radopholus* spp. populations from *Anthurium* production areas in Hawaii.

**Member of Thesis and Dissertation Committee**

Kelsy Mitsuda M.S. Current. Foliar nematode control using new nematicide formulations and ornamental plant safety associated with a new nematicide.

Natasha Navet Ph.D. Current. Dissecting the molecular basis of basil-Peronospora belbahrii interactions and genetic engineering for disease resistance

Brandi Adams M.S. 2019. Analysis and development of management tool for *Oryctes rhinoceros* (Coleoptera: Scarabaeidae).

Islam Hamim Ph.D. 2019. Molecular analysis of papaya viruses in Bangladesh: detection, characterization and distribution.

Philip Waisen Ph.D. 2019. Management of plant-parasitic nematodes and soil health using oil radish (*Raphanus sativus*) and brown mustard (*Brassica juncea*) cover crops.

Firas Ahmed Ph.D. 2018. Evaluation of chemical and biological controls for postharvest diseases of tomato.

Josiah Maquez M.S. 2017. Evaluating the effects of no-till cover cropping systems on indigenous entomopathogenic nematodes and fungi.

Dandan Shao M.S. 2017. Functional characterization of putative effector genes og basil downy milder pathogen *Peronospora belbahrii*.

Cynthia Lai Ph.D. 2016. Out-of-School Youth in Mindanao, Philippines: A case study supporting the UPLOAD jobs entrepreneurship-training program.

Shova Mishra M.S. 2016. Use of vermicompost for nematode control.

Shelby Ching M.S. 2015. Evaluating the potential of oyster mushroom compost waste for plant-parasitic nematode management. Current.

Mark Dragich M.S. 2015. Irradiation for fungal post-harvest rot control.

Bakash Paudel Ph.D. 2015. Evaluation of feasibility of conservation agriculture production systems (CAPS) for smallholder farmers in hilly regions of Nepal.

Kishore Dey Ph.D. 2014. Further characterization of and detection of pineapple mealybug wilt associated viruses (PMWaVs).

Jacqueline Halbrendt Ph.D. 2014. Assessing the barriers to adoption of conservation agriculture practices among Chepang communities in the central mid-hill of Nepal.

Shikha Srivastava Ph.D. 2014. Characterization and management of different *Fusarium* species associated with orchids cultivated in Hawaii.

Robert Anderson Ph.D. withdrew Fall 2013.

Ikaia Lewelei M.S. withdrew Fall 2013.

Miriam Long M.S. 2013. Plan B.

Ayami Shiraishi Ph.D. 2011. Study of koa wilt disease: Characterization of *Acacia koa* and *Fusarium oxysporum*.

Sayaka Aoki Ph.D. withdrew Fall 2011.

Sharadchandra Ph.D. 2011. Ecologically‑based nematode management: Exploiting

Marahatta nematode survival strategies for developing novel cover cropping and soil solarization practices

Archana Pant Ph.D. 2011. Vermicompost extract: Effects on crop growth and yield, nutritional content and soil biological properties.

Taakena Redfern M.S. 2010. Etiology of breadfruit diseases in Hawaii.

Matthews Paret Ph.D. 2009. Management of bacterial wilt of ginger (*Zingiber officinale* R.) caused by *Ralstonia solanacearum* with plant essential oils.

Cristene Verna Ph.D. 2009. Pineapple Mealybug Wilt associated Viruses: Diversity,

Subere distribution and vector transmission in Hawaii.

Tomie Vowell M.S. 2009. Optimization of the biocontrol consortium delivery and subsequent protection against *Xanthomonas axonopodis* pv. *dieffenbachiae*.

Cassandra Swett M.S. 2007. *Fusarium* disease on orchids in Hawaii.

Eden Perez Ph.D. 2006. Engineered resistance to pineapple mealybug wilt associated virus.

Parson Saradhuldhat Ph.D. 2006. Organic acid metabolism and accumulation during pineapple fruit growth and development.

Diane Sether Ph.D. 2002. Pineapple mealybug wilt associated virus epidemiology.

Xiangzhen Fu M.S. Plan B. 2002.

Denise Hurchanik M.S. 2001. Nutrient partitioning in coffee and cucumber infected with *Meloidogyne konaensis.*

Lan Chen M.S., withdrew Summer 1999.

James Leary M.S. 1999. The yield and growth response of vegetables in a buffelgrass (*Cenchrus ciliaris*) living mulch.

Xiangli Xu Ph.D., resigned March 1999.

Yu‑Huan Gu Ph.D. 1998. Development and application of a protoplast-based transformation system to genetic studies in *Phytophthora*.

William Wigmore M.S., withdrew September 1998.

Koon Hui Wang M.S. 1996. Genetic and cultural control of anthurium burrowing nematode, *Radopholus citrophilus*.

Fengru Zhang Ph.D. 1994. Characterization of life-history, damage potential, and spatial pattern of *Meloidogyne konaensis*.

Madhavi Gadepalli M.S., withdrew June 1993.

**Mentor to Students**

1993 Tomie Shiraishi, NSF Young Scholar

1994 Wesley Lum - selected a 1995 CTAHR Scholar with a $20,000 4-year scholarship

1995 Mandy Ikeda, NSF Young Scholar

1996 Craig Nishina, NSF Young Scholar

1997 Paul Galindo, NSF Young Scholar

1997 Sarah Mordan-McCombs, NSF Young Scholar

1999 Jonathan Peter French, Senior thesis research, Nebraska Wesleyan University

2006 Gary Ishida, Post-Baccalaureate researcher

2015 Paula Blum, Brazil Scientific Mobility Program

2015 Lucas Roderico Duarte, Brazil Scientific Mobility Program

2015 Fredrico Lara, Brazil Scientific Mobility Program

2016 Shreya Silori, Thai High School Summer Internship Program

2016 Fellipe Fernandez, Brazil Scientific Mobility Program

2017 Shreya Silori, Thai High School Summer Internship Program

2017 Shirley Thin Susn, Thai High School Summer Internship Program

2017 Candide Krieger, UH Undergraduate Research Opportunity Program

2018 Zarina Sirisachadecha, Thai High School Summer Internship Program

2018 Yanisa Vetchayanvivat, Thai High School Summer Internship Program

2019 Landon Wong, UH Undergraduate Researcher

**Visiting Scientists Hosted**

Diane Alston, Utah State University,(with D.P. Schmitt)

Sulaiman Ami - University of Mosul, Iraq. AHEAD Project

Buncha Chinnasri, Assistant to the Dean, Kasetsart University, Thailand

Buncha Chinnasri, Thailand Department of Agriculture. 1996. (with J. Moy)

Nandadi Goth, Indian Department of Agriculture (with A. Alvarez)

Kerrick Hartman, Monsanto Agricultural Sector Research

Kansiree Jindapunnapat, Researcher, Kasetsart University, Thailand

Harry Kaya, University of California, Davis (1 or 2 times annually1999-2007)

Michael Kermah - SARD Foundation, Ghana. USDA Borlaug Scholar

Tridate Khaithong, Researcher, Thailand Department of Agriculture

Li-Hong Meng, Associate Professor, Gannan Normal University, China

Fernado Vargas, Researcher, United States Department of Agriculture, ARS

**International Reviewer**

External Dissertation Reviewer

M. Hussain. Combining genes for enhancing rust resistance and high yield in wheat with

phenotypic and molecular markers. Ph.D. Candidate in Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

M. A. Khan. Interaction of plant pathogenic fungi and nematodes in root rot of cotton

and its integrated management. Ph.D. Candidate in Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

Expert for Probationary Review

Dr. Nasir Ahmad Khan, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

Dr. Sajid Aleem Khan, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

Dr. Imran ul Haq, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

Dr. Abdul Hannan, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

Dr. Abdul Rehman, Department of Plant Pathology, University of Agriculture, Faisalabad,

Pakistan.

Expert for Tenure Review

Dr. Luqman Amrao, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

Dr. Nasir Ahmad Khan, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

Dr. Sajid Aleem Khan, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

Dr. Imran ul Haq, Department of Plant Pathology, University of Agriculture, Faisalabad, Pakistan.

**Committee Service**

**University of Hawaii at Manoa**

**Research Ethics Committee**. 2017-2020. Appointed by Vice-President V. Syrmos. As a member of the committee, I am appointed to panels and review complaints brought forth to the University Research Integrity Program.

**Tenure and Promotion Review Committee**. 2016. Selected by the Chancellor to review dossiers for promotion and tenure. 2012. Selected by the Chancellor to review dossiers for promotion and tenure.

**Manoa Faculty Senator.** 2015-2017, Committee on Athletics. 2005-2007, Committee on Athletics (Chair 2007). 2002-2003, Committee on Professional Matters. 2001-2003, General Eduction Committee 2001-2002. 1999-2001, Student Affairs Committee.

**Ethical Issues Focus Board**. 2013-2015. Reviewed and recommended upper division undergraduate courses for ethical designation. Chair 2015.

**Graduate Council**. 2013-2016. Monthly meetings to advise the Graduate Dean on courses, programs, and administrative matters.

**Hearing Officer**. 2012. Nominated and approved by University System President and Union President.

**Promotion Review Panel**. 2012. Nominated and approved by University System President and Union President. 2008. Nominated and approved by University System President and Union President.

**Athletics Advisory Board**. 2011-2013. Nominated by University Chancellor, chaired Academic Integrity committee. 2005-2007. Nominated by University Chancellor, served on Gender Equity committee.

**Willard Wilson Award**. 2011. Selection Committee representing faculty for this system award.

**Faculty Advisory Committee on Academic Freedom**. 2010. Selected by Vice Chancellor.

**Panel of Referees**. 2007-2008. Nominated by University Chancellor to review cases of negative promotion decisions as prescribed by the collective bargaining agreement. 2005-2006. Nominated by University Chancellor to review cases of negative promotion decisions as prescribed by the collective bargaining agreement.

**Special Tenure and Promotion Committee**. Summer 2004. Reviewed expedited tenure dossier for administrative hires.

**Council on Program Review**. 2004-2006. Reviewed university programs and made recommendations to the Vice Chancellor. Convened Review of Hawaiian Studies Program.

**General Education Committee, Chair.** February 2001 to June 2002 (0.5 FTE), led the implementation of the new General Education Plan at Manoa, oversaw the addition of 800 courses to meet core requirements, developed policies and procedures for the new general education core.

**Regents Scholarship for Academic Excellence Selection Committee**. 2000-2005. Selection of 20 freshmen for 4-year scholarships consisting of tuition waivers, $4,000 annual stipends, and a $2,000 travel award. The committee was composed of faculty and staff from various University campuses and high schools.

**University Council on Articulation**. October 2000 to September 2002, University of Hawaii System council, monthly meetings to foster articulation and student transfer within the system.

**Student Conduct Committee.** September 1998 to May 2000 (0.01 FTE), judged student contestations of Dean of Students disciplinary action for breaking the student conduct code.

**Joint Committee on Undergraduate Affairs**. September 1999 to April 2000, a faculty and administration committee to evaluate the need for a dean of undergraduate education.

**Ad Hoc Committee to Review Civil Disobedience**. April to May 2000. Appointed by the President and Chancellor. Reviewed administration and student activities which occurred in March 2000, made suggestions the handling of future civil disobedience activities on campus. The committee was composed of faculty and students.

**College of Tropical Agriculture and Human Resources**

**Ad Hoc Committee on Merit Criteria**, convener and reporter, September to October 2000.

**Associate Dean for Academic Affairs Search Committee**, September 1999 to January 2000.

**Associate Dean for Academic Affairs Search Committee**, January 2004 to September 2005.

**Coordinating Counsel’s BioSystems Management Subcommittee**, Secretary 1995.

**CTAHR Faculty Senate**, 1995-1998, 2002-2007, 2009-2010, 2012-2013, 2014-2017. Senate Research Committee, Chair, 1999-2001. Senate Instructional Committee, Chair (2004), 2002-2005. Senate Executive Committee, Secretary 1997-1998, 2009-2010, Vice Chair 2016-2017, Chair 2006-2007 and 2010-2011.

**Dean’s Award for Excellence in Research**, Selection Committee member, 2011.

**Dean’s Award for Excellence in Teaching**, Selection Committee member, 2010

**National Association of Colleges and Teachers of Agriculture State Coordinator**, 1996 to 2002.

**Strategic Planning Committee Steering Committee**, Action Team 9, 2013-2015

**Student Research Symposium Judge** 1993, 2002, 2006, 2007, 2009, 2010, 2018.

**Department of Plant Pathology**

**Curriculum Committee**, Member, participated in redefining objectives and goals of the departmental qualifying exam, assisted in developing departmental graduate student handbook (1993‑96).

**Graduate Student Admission Committee**, Member, participated in recommending acceptance and rejection of students after reviewing their applications (1995‑1996, chaired in Fall 1995, Spring 1996).

**Diagnostic Exam Committee**, Member, assisted in developing questions and administering the exam to incoming students (1995‑96).

**Department of Plant and Environmental Protection Sciences**

**Chair**. 2010-2012. Nominated by faculty and selected by the Dean to chair the department.

**Tropical Plant Pathology Graduate Program Chair**, 2004-present. Revised and updated TPP graduate handbook (<http://www.ctahr.hawaii.edu/peps/tppgradhandbook/> Graduate\_handbook\_home.html), lead curriculum realignment in response to assessment activities.

**Assessment of Undergraduate Program**, 2001-2002, led the developed of the assessment plan.

**Greenhouse Committee**, Chair, 2001-present, charged with ensuring cleanliness and organization of head house area, instigating replacement and maintenance of greenhouses.

**Departmental Personnel Committee**, 2003-2004, 2006, 2009-2010, 2013-2014, 2016-2017 (Chair 2009, 2013, 2017).

**Assistant Professor of Plant Pathology Search Committee**, September 2004 to March 2005.

**Assistant Professor of Weed Science Search Committee**, Chair, June 2006 to January 2007.

**Assistant Professor of Plant Pathology Search Committee**, July 2015 to January 2016.

**Workshops Organized and Conducted**

Nematode Identification Refresher. 2003. Organized and presented a refresher training to DelMonte Fresh Produce Hawaii employees on sampling, extraction, and identification of plant-parasitic nematodes. The course was conducted twice. (11 attendees)

Pineapple Mini-Symposium. 2000. Organized presentations of current research activities

focused on pineapple for presentation to industry representatives. Planned content, sent invitations, and reserved rooms. (50 attendees)

Pineapple Mini-Symposium. 1997. Organized presentations of current research activities

focused on pineapple for presentation to industry representatives. Planned content, sent invitations, and reserved rooms. (50 attendees)

Nematode Identification Refresher. 1997. Organized and presented a refresher course to State

Department of Agriculture Plant Quarantine Inspectors on identification of plant-parasitic nematodes. Methods of extraction were discussed and compared. The course was conducted 4 times to accommodate inspectors. (16 attendees total)

**Presentations at Workshops**

PEPS 660 - Research Ethics. 2008. Invited presentation. Workshop on Ethics. International Arts and Humanities Conference. Honolulu, HI.

Nathaniel A. Cobb, Nematoligist. 2007. Invited presentation. Hawaii-Australia Pathways Conference. Honolulu, HI.

Banana IPM - Nematode Control. 2000. Invited presentation in Kauai County. (10 attendees)

Covering New Ground: Tropical Cover Crops for Improving Soil Quality. Cover crops for

nematode control. 1999. Invited presentation at a sustainable agriculture conference. (50 attendees)

Plant-parasitic Nematode Control in Bromeliads. 1997. Invited presentation given to the Bromeliad Society. (20 attendees)

Nematode Control in Bananas. 1996. Workshop presented at the request of county agent to local banana growers association. (50 attendees)

Plant Pathology Extension Course. April 1992. Taught plant-parasitic nematode module in course organized by Dr. S. Ferreira. Agents were awarded 1 credit of PPTH 699 for the course. (20 attendees)

**Professional and Honorary Societies**

**Society of Nematologists**

Past President, Executive Board Member. 2013-2014.

President, Executive Board Member. 2012-2013.

President Elect, Executive Board Member. 2011-2012.

Vice President, Executive Board Member. 2010-2011.

Treasurer, Executive Board Member. 2007-2010.

Secretary, Executive Board Member. 2003-2006.

*Nematology Newsletter*, Editor and Executive Board Member. 2000-2002.

*Journal of Nematology*, Editorial Board, 1996-1998;

Section Editor 2007-2009.

**Organization of Nematologists of Tropical America** (ONTA)

*Nematropica*, Editor-in-Chief. 2017-2020.

**American Phytopathological Society**

*Phytopathology*, Associate Editor 2010-2012.

Nematology Committee, 1993-1995, 2000-2010.

**Afro-Asian Society of Nematologists**

*International Journal of Nematology*, Editorial Board. 1999-2002.

**Gamma Sigma Delta, Honor Society of Agriculture**

Vice President, President, and Historian. 1999, 2000, and 2001, respectively.

Secretary, 1998, 2018.

Treasurer, 1995, 1996, 1997, 2018.

**Hawaii Academy of Science**

Pacific Symposium for Science and Sustainability, Reader. 1999-2012.

State Science and Engineering Fair, Category Head Judge. 1998-2015.

State Science and Engineering Fair, Judge. 1992-1997, 2017-present.

**Special Training**

USDA-APHIS Potato Cyst Nematode Diagnosis Workshop. Beltsville, MD. September 2008. Attendance sponsored by Y. Ishibashi, USDA-APHIS.

**Membership in Professional and Honorary Societies**

International Society of Horticultural Science Pineapple Working Group

American Phytopathological Society

Organization of Nematologists of Tropical America

Society of Nematologists

Gamma Sigma Delta, Honor Society of Agriculture

Hawaii Academy of Science