

HADDISH MELAKEBERHAN
Associate Professor of Nematology

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CITIZENSHIP: USA

CURRENT APPOINTMENT: AY; 85% Research and 15% Extension

EDUCATION:

Degree	University	Year	Major
Diploma	Ambo, Ethiopia	1974	Agriculture
Diploma	Harper Adams, England	1978	Crop Protection
M.Sc.	Imperial College, London	1980	Nematology
Ph.D.	Simon Fraser, Canada	1986	Nematology/Biology

PROFESSIONAL APPOINTMENTS-SUMMARY:

National:

Feb. 2010-present	Associate Professor, Department of Horticulture, MSU
Aug. 2006-Feb. 2010	Associate Professor, College of Ag & Natural Resources, MSU
July 2000-Aug. 2006	Associate Professor, Department of Entomology, MSU
Sept. 1998-August 2000	Professional IPM M.S. Degree Coordinator, Dept. of Ent., MSU
Feb. 1994-June 2000	Assistant Professor, Department of Entomology, MSU
Nov. 1991-Jan. 1994	Visiting Assistant Professor, Department of Entomology, MSU
June 1990-Oct. 1991	Research Associate, Department of Entomology, MSU
May 1986-July 1988	Post Doctoral Fellow, UC-Davis, California

International:

Aug. 25, 1997-Sept. 9, 1997	Instructor, Eritrean Ministry of Agriculture, Eritrea
Aug. 1988-May 1990	Research Associate, Simon Fraser University, Canada
Spring 1989	Instructor, Simon Fraser University, Canada
Jan. 10, 1989-Feb. 1, 1989	Instructor, University of Sam Ratulangi, Indonesia
Jan. 1981-April 1986	Graduate Research Assistant, Simon Fraser University, Canada
Sept. 1980-Dec. 1980	Research Associate, Imperial College, London, UK
June 1978-Sept. 1978	Research Assistant, Weed Research Organization, Oxford, UK
June 1974-Sept. 1977	Research Assistant, Institute of Agricultural Research, Ethiopia

Professional Societies:

1999-2003	Executive Board Member, Society of Nematologists (SON)
2002-2006	SON Councilor to the International Federation of Nematology Societies

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

Afro-Asian Society of Nematologists
European Society of Nematologists
Organization of Nematologists of Tropical America
Society of Nematologists

RESEARCH INTERESTS:

Integrated and sustainable nematode, nutrient cycling, and soil health management in cropping systems

EXTENSION and OUTREACH INTERESTS:

Translating biophysiochemical soil health information into practical application.

FUNDING SOURCES:

Over \$5 million research grant monies have been generated from the following agencies since 1994:

Horticulture Innovations Laboratory <http://horticulture.ucdavis.edu/2017/horticulture-innovation-lab-central-america.pdf>

Howard G. Buffett Foundation

AgBioResearch (Michigan Agricultural Experiment Station)

Michigan Carrot Commission

Michigan Celery Research Inc.

Michigan Cherry Marketing Institute

Michigan Department of Agriculture & Rural Development

Michigan Nursery and Landscape Association

Michigan Potato Industry Commission

Michigan Soybean Promotion Commission

Michigan Sugar Beet Industry

Michigan Vegetable Council

North Central Soybean Research Program

N-viro International

Project GREEN (State Initiative)

United Soybean Board (National)

USAID- Horticulture Innovations Laboratory <http://horticulture.ucdavis.edu/2017/horticulture-innovation-lab-central-america.pdf>

United States Department of Agriculture, Feed the Future Initiative

<https://www.feedthefuture.gov/institutional-sponsor/us-department-agriculture>

United States Department of Agriculture, Methyl Bromide Transition

United States Department of Agriculture, National Research Initiative

COURSES TAUGHT:

Regular Courses at MSU:

Course #	Description	Semester/Year
ENT 470	General Nematology	S 96, 97, 99, 03, 05
ENT 401	Directed/Independent Studies	SU 99, 00
ENT812	IPM Decision Making	S 00
ENT/BOT 870	Plant Nematology	S 95
ENT/PLP 870	Nematode Management in Cropping Sys.	SU 98, 00, 02
ENT 890	Directed/Independent Studies	SU 92, S 00
HRT 891	Ecosystem Services-Independent Studies	F 11

Courses Taught Outside MSU:

Eritrea: Introductory Nematology and Laboratory Techniques (8/25 – 9/9/97)

Canada: Problems of Crop Production in Developing Countries (Spring 1989)

Indonesia: Introductory Nematology and Research Methodology (1/14 – 2/1/89)

ADVISING AND MENTORING:

I have trained seven postdocs, seven graduate students (*two abroad*), served on two graduate committees, and mentored six High School Science Honors Program Students (*most practicing MDs*).

REASERCH OUTPUT:

INVITED TALKS AND SEMINARS AND WORKSHOPS THAT I PRESENTED:

1. The influence of *Meloidogyne incognita* on the physiology and yield of *Phaseolus vulgaris*. Department of Nematology, University of California, Davis. May 19, 1986.
2. Population biology of root-knot nematodes in grapes. Department of Nematology, University of California, Davis. April 4, 1988.
3. Pathogenicity of the pinewood nematode (*Bursaphelenchus xylophilus*). Department of Nematology, University of California, Davis. May 15, 1990.
4. Physiological mechanisms by which plant parasitic nematodes affect plant growth. Department of Entomology, Michigan State University, East Lansing. October 22, 1990.
5. Factors affecting sweet cherry tree health in Michigan. Department of Nematology, University of California, Davis. September 30, 1991.
6. What we know about sweet cherry tree death in Michigan. Department of Entomology, Michigan State University, East Lansing. October 21, 1991.
7. Looking beyond the obvious in diagnosing nematode-disease interactions and developing management strategies. Department of Nematology, UC, Riverside. May 18, 1992.
8. Nematodes and soil-driven factors affecting sweet cherry production in Michigan. MSU fruit school: Kellogg Biological Station, Hickory Corners, MI. January 30, 1992.
9. Effect of cover crops on nematode populations. Integrated Fruit Systems Management, Northwest Michigan Horticulture Station, MI. March 8, 1993.
10. Nematodes-biology and prospects for control. MSU Tree Fruit IPM School: Kellogg Biological Station, Hickory Corners, MI. February 4, 1993.
11. Factors contributing to food deficit in Ethiopia. African Studies Center, MSU. June 16, 1993.
12. Personal and professional experiences in the sciences. Department of Mathematics - Science Program for Michigan Minority Youth, MSU. July 20, 1994.
13. An integrated approach toward a sustainable nematode management plan. Department of Entomology Seminar Series, Michigan State University. March 20, 1995.
14. Balancing professional and personal lives in a multicultural system. Department of Biology, Xavier University of New Orleans. December 7, 1995.
15. Nematodes and pH profiles in orchard root zones. Northwest Michigan Orchard Show, Grand Traverse City, MI. February 1, 1996.
16. Soil pH-when it is not an infectious disease. MSU Tree Fruit IPM School, Kellogg Biological Station, Hickory Corners, MI. February 13, 1996.
17. Nematodes: symptoms and integrated control strategies. MSU Tree Fruit IPM School, Kellogg Biological Station, Hickory Corners, MI. February 14, 1996.
18. Nematodes in the ecosystem. Department of Mathematics - Science Program for Michigan Minority Youth, Michigan State University. July 17, 1996.
19. Understanding the international scholar environment: A professor's view. International Student Life and Student Services, Michigan State University, East Lansing, USA. August 24, 1997.
20. Interrelationships of soil pH, nematodes and bacterial canker on sweet cherry trees. Integrated Fruit Systems Program, Traverse City, MI, USA. March 13, 1998.
21. Nutrition-based management of plant-parasitic nematodes – what is the potential? Department of Entomology, Michigan State University, East Lansing. November 29, 1999.
22. The potential of nutrition-based management of plant-parasitic nematodes. Department of Biology, University of Toledo, Toledo. February 25, 2000.
23. Revolutionizing detection and management of soybean cyst nematode in changing production systems. Department of Crop Sciences, University of Illinois, Urbana-Champaign. March 20, 2000.

24. The pros and cons of manipulating plant nutrition to adversely affect *Heterodera glycines*.
Department of Crop Sciences, University of Illinois, Urbana-Champaign. March 21, 2000.
25. Embracing the emerging precision agriculture technologies for site-specific management of yield-limiting factors. Joint Society of Nematologists, American Phytopathological Society, and Mycological Society of America Meeting, Salt Lake City, UH. August 26, 2001.
26. Potential for biocontrol of orchard pests-Lessons from the Colorado potato beetle. Integrated Fruit Systems Program, Traverse City, MI. April 5, 2002.
27. Nematodes: Quarantine from a European perspective and historical lessons. Horticultural Inspectors Society Annual Meeting, Battle Creek, MI. October 17, 2006.
28. Nutrient use efficiency and precision management of nematodes-Concepts and possibilities. 27th Congress of the Brazilian Society of Nematologist, Goiania, Brazil. May 7-11, 2007.
29. Spatio-temporal analysis of soil conditions and site-specific management of nematodes. 2nd Conference on Precision Crop Protection, University of Bonn, Germany. October 10-12, 2007.
30. Emerging strategies for non-pesticide nematode control in celery. Great Lakes Fruit, Vegetable and Farm Market Expo. Grand Rapids, MI. December 5, 2007.
31. Soil health with specific emphasis on nematodes. Michigan Family Farms Conference. Battle Creek, MI. January 19, 2008.
32. Critical considerations in managing nematodes with potential trap and cover crops. Michigan Organic Agriculture Group, MSU. East Lansing, MI. March 5, 2008.
33. Roles for nematology in understanding renewable energy needs and balancing food and socio-economic interests. 5th International Congress of Nematology, Brisbane, Australia. July 17, 2008.
34. Understanding challenges to creating bridges with developing regions. 5th International Congress of Nematology, Brisbane, Australia. July 14, 2008.
35. Managing nematode parasitic variability: case studies of soybean cyst nematode and root-knot nematodes. 19th Symposium of the Nematological Society of Southern Africa, Hazyview, South Africa. June 18, 2009.
36. Application of fertilizer-use efficiency model for changing and managing soil conditions in agro-biologically integrated ways. 19th Symposium of the Nematological Society of Southern Africa, Hazyview, South Africa. June 20, 2009.
37. Cross-disciplinary efficiency assessment of soil amendments. Joint Meeting of the Society of Nematologists and Soil Ecology Society. Burlington, VT. July 13, 2009.
39. Perspectives for nematology education in the 21st Century: Lessons from the past to make the future better. Joint Meeting of the Brazilian Society of Nematologists and Society of Tropical American Nematologists. Maceio, Brazil. October 8, 2009.
39. From managing herbivores to managing all nematodes as part of a soil ecosystem: A paradigm shift towards agro-ecologically sustainable solutions. Department of Horticulture, MSU. December 1, 2009.
40. Hidden biological secrets that could revolutionize ecosystem based food security and adaptation to climate change in degraded sub-Saharan Africa soils. UN Conference on Harnessing Ecosystem Services, Nairobi, Kenya. August 20-21, 2013.
41. Increasing student participation to ensure the future of nematology in raising the standard of life in developing countries struggling with ecosystem degradations. 6th International Congress of Nematology, May 5, Cape Town, South Africa. **Plenary Session.**
42. Nematology Training in the United States of America and what the future holds. 6th International Congress of Nematology, May 9, Cape Town, South Africa. **Key Note.**
43. Quantifying biological basis of soil health degradation in selected sub-Saharan Africa soil groups. 6th International Congress of Nematology, May 9, Cape Town, South Africa. **Key Note.**

44. Nematodes and soil health management. *Great Lakes Expo 2022, Soil Health and Cover Cropping Session*. December 7, Grand Rapids, Michigan. 2022 Education Program – Great Lakes Expo Conference Site (glexpo.com).

SEMINARS AND WORKSHOPS TEAM PRESENTED

45. **Melakeberhan, H.** and A. Habteweld (2022a). Expanding indicator qualities of nematodes to identify sustainable soil health. 7th *International Congress of Nematology*, May 2, Nice, France. **Workshop**. <https://www.alphavisa.com/icn/2022/replay-monday-2-may-miles-ICN2022.php>.
46. **Melakeberhan, H.** and A. Habteweld (2022b). Using nematode community-based models as integration platforms for developing sustainable soil health. *61st Annual Meeting of the Society of Nematologists*. September 29, Anchorage, Alaska. **Workshop**.
47. **Melakeberhan, H.** and S. Kakaire (2022). Balancing nematodes and cover crop management. *Great Lakes Expo 2022, Vegetables Session*. December 6, Grand Rapids, Michigan. 2022 Education Program – Great Lakes Expo Conference Site (glexpo.com).

PEER-REVIEWED PUBLICATIONS:

1. **Melakeberhan, H.**, J.M. Webster and R.C. Brooke (1984). Improved techniques for measuring the CO₂ exchange rate of *Meloidogyne*-infected beans. *Nematologica*, 30: 213-221.
2. **Melakeberhan, H.**, R.C. Brooke, J.M. Webster and J.M. D'Auria (1985). The influence of *Meloidogyne incognita* on growth, nutrient content and physiology of *Phaseolus vulgaris*. *Physiological Plant Pathology*, 26: 259-268.
3. **Melakeberhan, H.**, J.M. Webster and R.C. Brooke (1985). Response of *Phaseolus vulgaris* to a single generation of *Meloidogyne incognita*. *Nematologica*, 31: 190-202.
4. **Melakeberhan, H.**, J.M. Webster and R.C. Brooke (1986). Relationship between physiological response and yield loss of different age French bean to *Meloidogyne incognita*. *Plant Pathology*, 35: 203-213.
5. **Melakeberhan, H.**, J.M. Webster, R.C. Brooke, J.M. D'Auria and M. Cackette (1987). Effect of *Meloidogyne incognita* on plant nutrient concentration and its influence on the physiology of beans. *Journal of Nematology*, 19: 324-330.
6. **Melakeberhan, H.**, J.M. Webster, R.C. Brooke and J.M. D'Auria (1988). Effect of KNO₃ on CO₂ exchange rate, nutrient concentration and yield of *Meloidogyne incognita*-infected beans. *Revue de Nematologie*, 11: 391-397.
7. **Melakeberhan, H.** and H. Ferris (1988). Growth and energy demand of *Meloidogyne incognita* in susceptible and resistant *Vitis vinifera* cultivars. *Journal of Nematology*, 20: 545-554.
8. **Melakeberhan, H.** and H. Ferris (1989). Impact of *Meloidogyne incognita* on physiological efficiency of *Vitis vinifera*. *Journal of Nematology*, 21: 74-80.
9. **Melakeberhan, H.**, H. Ferris, M.V. McKenry and J.T. Gaspard (1989). Overwintering stages of *Meloidogyne incognita* on *Vitis vinifera*. *Journal of Nematology*, 21: 92-98.
10. **Melakeberhan, H.**, H. Ferris and J. Dias (1990). Physiological response of resistant and susceptible *Vitis vinifera* cultivars to *Meloidogyne incognita*. *Journal of Nematology*, 22: 224-230.
11. **Melakeberhan, H.** and J.M. Webster (1990a). Relationship between *Bursaphelenchus xylophilus* population densities and mortality of *Pinus sylvestris*. *Journal of Nematology*, 22: 297-302.
12. **Melakeberhan, H.** and J.M. Webster (1990b). Effect of *Bursaphelenchus xylophilus* on the assimilation and translocation of ¹⁴C in *Pinus sylvestris*. *Journal of Nematology*, 22: 506-512.
13. **Melakeberhan, H.**, P.M.A. Toivonen, W.E. Vidaver, J.M. Webster and S. Dube (1991). Effect of *Bursaphelenchus xylophilus* on water potential and the water-splitting complex of

- photosystem II of *Pinus sylvestris* seedlings. *Physiological and Molecular Plant Pathology*, 38: 83-91.
14. **Melakeberhan, H.** and J.M. Webster (1992). The insignificance of the energy requirements of *Bursaphelenchus xylophilus* as a causal factor in *Pinus sylvestris* seedling mortality. *Fundamental and Applied Nematology*, 15: 179-182.
 15. **Melakeberhan, H.**, T.A. Rutherford and J.M. Webster (1992). Influence of temperature on reproduction of *Bursaphelenchus xylophilus* and *Pinus sylvestris* mortality. *Nematologica*, 38: 80-87.
 16. **Melakeberhan, H.**, A.L. Jones, P. Sobiczewski and G.W. Bird (1993). Factors associated with the decline of sweet cherry trees in Michigan: Nematodes, *Pseudomonas* spp., nutrition, soil pH, and winter injury. *Plant Disease*, 77: 266-271.
 17. **Melakeberhan, H.** and J.M. Webster (1993). Phenology of plant-nematode interaction and yield loss. Pages 26-41, in M. W. Khan (ed.) *Nematode Interactions*. Chapman & Hall, London.
 18. **Melakeberhan, H.**, G.W. Bird and R.L. Perry (1994). Plant-parasitic nematodes associated with cherry rootstocks in Michigan. *Annals of Applied Nematology*, 26:767-772.
 19. Bird, G.W. and **H. Melakeberhan** (1995). Nematode diseases. Pages 61-64, in J.M. Ogawa, E.I. Zehr, G.W. Bird, D.F. Ritchie, K. Uriu, and J.K. Uyemoto (eds.) *Compendium of Stone Fruit Diseases*. American Phytopathological Society Press.
 20. **Melakeberhan, H.**, A.L. Jones, E. Hanson and G.W. Bird (1995). Effect of low soil pH on aluminum availability and on mortality of Mazzard of cherry seedlings. *Plant Disease*, 79: 886-892.
 21. Melakeberhan, H. (1997). Role of plant nutrition on alleviating nematode parasitism. Pages 759-760, In : T. Ando, K. Fujita, T. Mae, H. Matsumoto, S. Mori, and J. Sekiya (eds.) *Plant Nutrition for Sustainable Food Production and Environment*. Kluwer Academic Publishers, London.
 22. Melakeberhan, H. (1997). Plant, nematode and nutrient relations: An overview. *Japanese Journal of Nematology*, 27: 41-51.
 23. **Melakeberhan, H.**, G.W. Bird, and R. Gore. (1997). Impact of nutrients on *Pratylenchus penetrans* infection of *Prunus avium* rootstocks. *Journal of Nematology*, 29: 381-388.
 24. Melakeberhan, H. (1998a). Effects of temperature and nitrogen source on tomato genotypes response to *Meloidogyne incognita*. *Fundamental and Applied Nematology*, 21: 25-32.
 25. Melakeberhan, H. (1998b). Pathogenicity threshold of *Pratylenchus penetrans*, *Heterodera glycines*, and *Meloidogyne incognita* on soybean genotypes. *Journal of Nematology*, 30: 93-98.
 26. Melakeberhan, H. (1999). Effect of nutrient source on the physiological mechanisms of *Heterodera glycines* and soybean genotype interactions. *Nematology*, 1: 113-120.
 27. Wang, J., P. A. Donald, T. L. Niblack, G. W. Bird, J. Faghihi, J. M. Ferris, D. J. Jardine, C. Grau, P. E. Lipps, A. E. MacGuidwin, **H. Melakeberhan**, G. R. Noel, P. Pierson, R. M. Riedel, P. R. Sellers, W. C. Stienstra, T. C. Todd, G. L. Tylka, T. Wheeler, D. S. Wysong. (2000). Soybean cyst nematode reproduction in the north central United States. *Plant Disease*, 84: 77-82.
 28. **Melakeberhan, H.**, A.L. Jones and G.W. Bird. (2000). Effects of soil pH and *Pratylenchus penetrans* on the pathogenesis of *Pseudomonas syringae* pv. *syringae* and Mazzard seedling mortality. *Canadian Journal of Plant Pathology*, 22: 131-137.
 29. Kaitany, R., **H. Melakeberhan**, G. W. Bird and G. Safir. (2000). Association of *Phytophthora sojae* with *Heterodera glycines* and nutrient stress. *Nematropica*, 30: 193-199.
 30. **Melakeberhan, H.**, A. L. Jones and G.W. Bird. (2001). Soil pH affects nutrition balance of cherry rootstocks. *HortScience*, 36:916-917.
 31. Melakeberhan, H. (2002). Embracing the emerging precision agriculture technologies for site-specific management of yield-limiting factors. *Journal of Nematology*, 34: 185-188.

32. Avendaño, F., O. Schabenberger, F. J. Pierce, and **H. Melakeberhan**. (2003). Geostatistical analysis of field spatial distribution patterns of the soybean cyst nematode, *Heterodera glycines*. *Agronomy Journal*, 95:936-948.
33. **Melakeberhan, H.**, and J. Dey. (2003). Competition between *Heterodera glycines* and *Meloidogyne incognita* or *Pratylenchus penetrans*: Independent infection rate measurements. *Journal of Nematology*, 35:1-6.
34. Melakeberhan, H. (2004). Physiological interaction between nematodes and their host plants. Pages 771-794 in: Z.X. Chen, S. Y. Chen, and D. W. Dickson (eds.) *Nematology, Advances and Perspectives. Volume II: Nematode Management and Utilization*. Tsinghua University Press, China and CABI Publishing.
35. Avendano, F., F.J. Pierce, O. Schabenberger, and **H. Melakeberhan**. (2004). The spatial distribution of soybean cyst nematode in relation to soil texture and soil map unit. *Agronomy Journal*, 96: 181-194.
36. Avendano, F., F.J. Pierce, and **H. Melakeberhan**. (2004a). The relationship between *Heterodera glycines* seasonal population dynamics and soil texture. *Nematology*, 6: 511-526.
37. Avendano, F., F.J. Pierce, and **H. Melakeberhan**. (2004b). Spatial analysis of soybean yield in relation to soil texture, soil fertility and soybean cyst nematode. *Nematology*, 6: 527-546.
38. **Melakeberhan, H.**, J. Dey, V.C. Baligar, and T.E. Carter Jr. (2004). Effect of soil pH on the pathogenesis of *Heterodera glycines* and *Meloidogyne incognita* on *Glycine max* genotypes. *Nematology*, 6: 582-594.
39. Melakeberhan, H. (2006). Fertiliser use efficiency of soybean cultivars infected with *Meloidogyne incognita* and *Pratylenchus penetrans*. *Nematology*, 8: 129-137.
40. Mennan, S., S. Chen, and **H. Melakeberhan**. (2006). Suppression of *Meloidogyne hapla* populations by *Hirsutella minnesotensis*. *Biocontrol Science and Technology*, 16:181-193.
41. Mennan, S., and **H. Melakeberhan**. (2006). Comparative efficacy of oil seed radish and tomato root exudates on hatching of *Meloidogyne hapla*. *Journal of Biological Sciences*, 1:1-5.
42. Donald, P. A., P.E. Pierson, S. K. St. Martin, P.R. Sellers, G.R. Noel, A.E. MacGuidwin, J. Faghihi, V.R. Ferris, C.R. Grau, D.J. Jardine, **H. Melakeberhan**, T.L. Niblack, W.C. Stienstra, G.L. Tylka, T. A. Wheeler, and D.S. Wysong (2006). Assessing *Heterodera glycines*-resistant and susceptible cultivar yield response. *Journal of Nematology*, 38: 76-82.
43. **Melakeberhan, H.**, and G. R. Noel (2006). Effects of biosolid soil amendment on *Heterodera glycines* populations. *Journal of Nematology*, 38:349-353.
44. **Melakeberhan, H.**, A. Xu, A. Kravchenko, S. Mennan, and E. Riga (2006). Potential use of arugula (*Eurica sativa* L.) as a trap crop for *Meloidogyne hapla*. *Nematology* 8:793-799.
45. **Melakeberhan, H.**, S. Mennan, S. Chen, B. Darby, and T. Dudek (2007). Integrated approaches to understanding and managing *Meloidogyne hapla* populations' parasitic variability. *Crop Protection* 26:894-902.
46. Mennan, S., S. Chen, and **H. Melakeberhan**. (2007). Effects of *Hirsutella minnesotensis* and N-Viro soil on populations of *Meloidogyne hapla*. *Biocontrol Science and Technology* 17:233-246.
47. Melakeberhan, H. (2007). Effect of starter nitrogen on soybeans under *Heterodera glycines* infestation. *Plant and Soil* 301: 111-121.
48. Ferris, H. and **H. Melakeberhan** (2008). Nematode Physiology: Significant developments in the understanding of the biology of simple eukaryotic animals. Pages 80-97 in: J.M. Webster, K.B. Eriksson, and D. G. McNamara (eds.) *An Anecdotal History of Nematology*. Pensoft Publishers, Sofia-Moscow.
49. **Melakeberhan, H.**, S. Mennan, M. Ngouajio, and T. Dudek (2008). Effect of *Meloidogyne hapla* on multi-purpose use of oilseed radish (*Raphanus sativus*). *Nematology* 10: 375-379.
50. Melakeberhan, H. (2008). Nutrient use efficiency and precision management of nematodes-Concepts and possibilities. *Nematologia Brasileira* 32:1-12.

51. **Melakeberhan, H.**, and M.F. Avendano (2008). Spatio-temporal consideration of soil conditions and site-specific management of nematodes. *Precision Agriculture* 9: 341-354.
52. Zasada, I., M.F. Avendano, Y.C., Li, T. Logan, **H. Melakeberhan.**, S.R. Koenning, and G.L. Tylka (2008). Potential of alkaline-stabilized biosolid to manage nematodes: Case studies on soybean cyst and root-knot nematodes. *Plant Disease* 92:4-13.
53. **Melakeberhan, H.** (2010). Cross-disciplinary efficiency assessment of agronomic and soil amendment practices designed to suppress biotic yield-limiting factors. *Journal of Nematology*, 42: 73-77.
54. **Melakeberhan, H.**, A. Kravchenko, J. Dahl, and D. Warncke (2010). Effects of soil types and *Meloidogyne hapla* on the multi-purpose uses of arugula (*Eruca sativa*). *Nematology*, 12: 115-120.
55. Mennan, S. and **H. Melakeberhan** (2010). Effects of biosolid amendment on populations of *Meloidogyne hapla* in soil with different textures and pHs. *Bioresource Technology*, 101: 7169-7175.
56. Melakeberhan, H., D. Douches, and W. Wang (2012). Interactions of selected potato cultivars and populations of *Meloidogyne hapla* adapted to the US Midwest soils. *Crop Science*, 52:1-6.
57. Melakeberhan, H. and W. Wang (2012). Suitability of celery cultivars to populations of *Meloidogyne hapla*. *Nematology*, 14:623-629.
58. Melakeberhan, H. and W. Wang (2013). Proof-of-concept for managing *Meloidogyne hapla* parasitic variability in carrot production soils. *Nematology*, 14:339-346.
59. Melakebehan, H., Z.T.Z. Maung, S. Yildiz, T. Schmidt, T. Teal, J. Qi, J. Gronseth, C. Kwoseh, T. Adjei-Gyapong, V. Saka, M. Lowole, J.W. Kimenju, G.N. Karuku, P.M. Wachira, G. Kariuki, and V.N. Gathaara (2013). Hidden biological secrets that could revolutionize ecosystem based food security and adaptation to climate change in degraded sub-Saharan Africa soils. UNEP Conference on Harnessing Ecosystem Services, Nairobi, Kenya, August 20-21, 2013. <http://www.foodsec.aaknet.org/index.php/widgetkit/capacity-building>.
60. Atibalentja, N., P.A. Donald, G.R. Noel, **H. Melakeberhan**, S. Chen, J. Faghihi, C.R. Grau, A.E. MacGuidwin, R.D. Riggs, W.C. Stienstra, G.L. Tylka, and T. Welacky (2013). Soybean yield and *Heterodera glycines* population dynamics as affected by cultural practices in major production areas of the United States and Canada. *Journal of Nematology*, 00: 000-000. In Press.
61. Nair, M.G., Seenivasan, N., Liu, Y., Feick, R.M., Maung, Z.T.A. and **Melakeberhan, H.** (2015). Leaf constituents of *Curcuma* spp. suppress *Meloidogyne hapla* and increase bacterial-feeding nematodes. *Nematology*, 17:353–361.
62. **Melakeberhan H**, W. Wang, A. Kravchenko, and K. Thelen (2015). Effects of agronomic practices on the timeline of *Heterodera glycines* establishment in a new location. *Nematology*, 17:705-713.
63. Grabau, Z.J., Z.T.Z. Maung, C. Noyes, D. Baas, B.P. Werling, D.C. Brainard, and **H. Melakeberhan** (2017). Effects of cover crops on *Pratylenchus penetrans* and the nematode community in carrot production. *Journal of Nematology*, 49:114-123.
64. Asiedu, O., **C. K. Kwoseh**, H. Melakeberhan, and T. Adjeigyapong (2017). Nematode distribution in cultivated and undisturbed soils of Guinea Savannah and Semi-deciduous Forest zones of Ghana. *Geoscience Frontiers*. <https://doi.org/10.1016/j.gsf.2017.07.010>.
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