Michael Kantar

**College of Tropical Agriculture and Human Resources**

Tropical Plant and Soil Science

FTE Distribution: 30% I; 70% R;

**Education**

**Degree University Major**

PhD, 2013 University of Minnesota Plant Breeding/Molecular Genetics

MS, 2008 University of Minnesota Plant Breeding/Molecular Genetics

BS, 2006 University of Minnesota Applied Plant Science

**Professional Appointments**

**Title Employer Dates Employed**

Associate Professor University of Hawaii at Manoa 2021-current

Assistant Professor University of Hawaii at Manoa 2016-2021

Postdoctoral Fellow University of British Columbia 2013-2015

Research Associate University of Minnesota 2013-2015

Visiting Scholar International Center for Tropical Agriculture (CIAT) 2014

Fellow Beaty Biodiversity Museum 2013-2015

Fellow Forever Green Initiative, University of Minnesota 2012-Current

Visiting Scholar International Rice Research Institute (IRRI) 2008

Fellow Leshner Leadership Institute 2018

Fellow Sencer Water Institute, Honolulu, HI 2018

Fellow Migal Institute in the Upper Galilee 2019

**Courses Taught**

NREM 310-Introduction to Statistics (3)

TPSS 453-Plant Breeding and Genetics (3)

​TPSS 416-Introduction to Social, Ethical, and Political Issues Associated with Biotechnology (3)

TPSS 603-Experimental Design (4)

TPSS 615-Quantitative Genomics and Evolution (3)

TPSS 667-Seminar in tropical plant and soil sciences(1)

TPSS 667-World Food Problems: Evaluating Starvation (1)

TPSS 711- Statistics of Time and Space (2)

**Publications**

Books

1. Green, S., Williams, K. Marek, L., Kantar, M., Khoury, C. (Ed) Crop Wild Relatives of North America. 2018. Volume 1. Springer International Publishing. Cham. Switzerland. DOI: 10.1007/978-3-319-95101-0

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1. Green, S., Williams, K. Marek, L., Kantar, M., Khoury, C. (Ed) Crop Wild Relatives of North America. 2018. Volume 2. Springer International Publishing. Cham, Switzerland. DOI: 10.1007/978-3-319-97121-6

Book Chapters

1. Thompson, A, Kantar, MB, Rainey, K. 2021. Designing experiments for physiological phenomics. (Accepted Springer)
2. Bock, D, Kantar, MB, Rieseberg, L. 2020. The population genomics of speciation and adaptation in sunflowers. In: Population Genomics. Springer, Cham. https://doi.org/10.1007/13836\_2020\_85
3. Miyasaka SC, Bellinger MR, Kantar MB, Helmkampf M, Wolfgruber T, Paudel R, Shintaku M. 2019. Genetic Diversity in Taro (Colocasia esculenta). In Genetic Diversity in Horticultural Plants (pp. 191-215). Springer, Cham.
4. Anderson, JE, Campbell, A, Kantar, MB. Crop Wild Relatives of North American Root Vegetables. Chapter 8. In Green, S. (Ed) Crop Wild Relatives of North America: Volume 2. Springer International Publishing. Cham, Switzerland.
5. McCoy, JA, Young, JH, Nifong, JM, Hummer, K, DeNoma, J, Avendaño-Arrazate, CH, Kantar, MB, Greene, SL. Species for medicinal and social use with an emphasis on Theobroma cacao L. (cacao), Nicotiana tabacum L. (tobacco), Actaea racemosa L. (black cohosh), Humulus lupulus L. (Hops). Chapter 19. In Green, S. (Ed) Crop Wild Relatives of North America: Volume 2. Springer International Publishing. Cham, Switzerland.
6. Khoury, CK, Greene, SL, Williams, KA, Kantar, MB, Marek, LF. Conservation and Use of the North American Plant Cornucopia: The Way Forward. Chapter 20. In Green, S. (Ed) Crop Wild Relatives of North America: Volume 2. Springer International Publishing. Cham, Switzerland.
7. Kantar, MB, Hubner, S, Rieseberg, LH. 2016. Broadening the genetic basis for crop improvement: Interspecific hybridization within and between ploidy levels in Helianthus. In Mason, A.S. (Ed) Polyploidy and Interspecific Hybridization for Crop Improvement, CRC Press, Boca Raton, United States of America.

Refereed Journal Publications

1. Joo, K, Muszynski, M, Kantar, MB, Del Valle Echevarria, AR Using CRISPR for tropical crop improvement: A decision process for fitting genome engineering to your species (accepted Frontiers in Genetics)
2. MacQueen, AH, Khoury, CK, Miklas, P, McClean, PE, Osorno, JM, Runck, BC, White, JW, Kantar, MB, Ewing, PM. From local to continent-scale variation in yield heritability in common bean (Phaseolus vulgaris). (Accepted Crop Science)
3. Minter, M, Nielsen, ES, Blyth, C, Bertola, LD, Kantar, MB, E Morales, HE, Orland, C, Segelbacher, G, Leigh, DM. What is genetic diversity and why does it matter? (Accepted Frontiers for Young Minds)
4. Del Valle Echevarria, AR, Fumia, N, Gore, MA, Kantar, MB. 2021. Accelerating Crop Domestication in the Era of Gene Editing. (Accepted Plant Breeding Reviews)
5. Anderson, T, Radovich, T, Bingham, J-P, Sinclair, N, Bryant, G, Kantar, MB. 2021. Evaluation of Hawaiian Heritage Sweet Potato (Ipomoea batatas (L.) Lam.) Breeding Lines. Agronomy, 11, 1545. https://doi.org/10.3390/agronomy11081545
6. Steed, A., Tomlinson, B, Kantar, MB, Raghavan, B. 2021. How Smart is the Smart Farm? In Proceedings of the 8th International Conference on ICT for Sustainability
7. Wolfe, M, Jannick, JL, Kantar, MB, Santantonio, N. 2021. Multi-species genomics-enabled selection for improving agroecosystems across space and time. Frontiers in Plant Science, 12, 1079.
8. Wang, DR, Imel RK, Paull RE, Kantar, MB. An online learning module for plant growth analysis using high-throughput phenotyping data. Nat Sci Educ. 50:1 https://doi.org/10.1002/nse2.20056
9. Maaz, T, Sapkota, T, Eagle, A, Kantar, M, Bruulsema, T, Majumdar, K. 2021. Meta-analysis of yield and nitrous oxide outcomes of nitrogen management in agriculture. Global Change Biology. https://doi.org/10.1111/gcb.15588
10. Hubner, S, Kantar, MB. 2021. Tapping diversity from the wild: sampling, characterizing and implementing. Front. Plant Sci., 27. https://doi.org/10.3389/fpls.2021.626565.
11. Fortin, J, Bartlett, B, Kantar, MB, Tseng, M, Mehrabi, Z. 2021. Digital technology helps remove gender bias in academia. Scientometrics. https://doi.org/10.1007/s11192-021-03911-4
12. Winnicki, E, Kagawa-Viviani, A, Perez, K, Radovich, T, Kantar, MB. 2021. Characterizing the Diversity of Hawai‘i Sweet Potatoes (Ipomoea batatas [L.] Lam.). Econ Bot. https://doi.org/10.1007/s12231-020-09511-2
13. La Valle, FF, Kantar, MB, Nelson, CE. 2020. Coral reef benthic community structure is associated with the spatiotemporal dynamics of submarine groundwater discharge chemistry. Limnol Oceanogr. doi:10.1002/lno.11596
14. Tomiyama, J, Takagi, D, Kantar, MB. 2020. The effect of acute and chronic food shortage on human population equilibrium in a subsistence setting. Agric & Food Secur 9, 6. https://doi.org/10.1186/s40066-020-00261-x
15. Pironon, S, Borrell, JS, Ondo, I, Douglas, R, Phillips, C, Khoury, CK, Kantar, MB, Fumia, N, Soto Gomez, M, Viruel, J, Govaerts, R, Forest, F, Antonelli, A. 2020. Toward Unifying Global Hotspots of Wild and Domesticated Biodiversity. Plants 9 (9), 1128. https://doi.org/10.3390/plants9091128
16. Viruel, J, Kantar, MB, Gargiulo, R, Hesketh-Prichard, P, Leong, N, Cockel, C, Forest, F, Gravandeel, B, Perez-Barrales, R, Leitch, I, Wilkin, P. 2020. Crop Wild Phylorelatives (CWPs): phylogenetic distance, cytogenetic compatibility and breeding system data enable estimation of crop wild relative gene pool classification. Botanical Journal of the Linnean Society. https://doi.org/10.1093/botlinnean/boaa064
17. El‐Sabaawi, R, Kantar, MB, Moore, T, Pantel, JH, Tseng, M, Ware, J. 2020. The EEB POC Project. Limnology and Oceanography Bulletin. https://doi.org/10.1002/lob.10390
18. Tseng, M, El-Sabaawi, RW, Kantar, MB, Pantel, JH, Srivastava, DS, Ware, JL. 2020. Strategies and support for Black, Indigenous, and people of colour in ecology and evolutionary biology. Nat Ecol Evol. https://doi.org/10.1038/s41559-020-1252-0
19. Bellinger, MR, Paudel, R, Starnes, S, Kambic, L, Kantar, MB, Wolfgruber, T, Lamour, K, Geib, S, Sim, S, Miyasaka, S, Helmkampf M, Shintaku, M. 2020. Taro Genome Assembly and Linkage Map Reveal QTLs for Resistance to Taro Leaf Blight. G3: 10:2763-2775. https://doi.org/10.1534/g3.120.401367
20. Runck, BC, Khoury, CK, Ewing, PM, Kantar, MB. 2020. The hidden land use cost of upscaling cover crops. Commun Biol 3, 300. https://doi.org/10.1038/s42003-020-1022-1
21. Del Valle Echevarria, AR, Campbell, A, Radovich, TJK., Silvasy, T, Moore, S, Kantar, MB. 2020. Quantitative Trait Loci (QTL) Analysis of Fruit and Agronomic Traits of Tropical Pumpkin (Cucurbita moschata) in an Organic Production System. Horticulturae, 6, 14. https://doi.org/10.3390/horticulturae6010014
22. Khoury, CK, Barchenger, DW, Carver, D, Barboza, G, van Zonneveld, M, Jarret, R, Bohs, L, Kantar, MB, Uchanski, M, Mercer, K, Nabhan, GP, Bosland, PW, Greene, SL. 2020. Crop wild relatives of chile pepper (Capsicum L.): Distributions, conservation status, and implications for adaptations to abiotic stresses Diversity and Distributions. 26(2): 209-25. doi.org/10.1111/DDI.13008Ewing, P, Runck, B, Kono,TYJ, Kantar, MB. 2019. The home field advantage of modern plant breeding. https://doi.org/10.1371/journal.pone.0227079
23. Anderson, J, Kantar, MB, Bock, D, Chaw Grubbs, K, Schilling, E, Rieseberg, L. 2019. Skim-Sequencing Reveals the Likely Origin of the Enigmatic Endangered Sunflower Helianthus schweinitzii. Genes, 10(12), 1040; https://doi.org/10.3390/genes10121040
24. Ekar, JM, Betts, KJ, Herman, AC, Stupar, RM, Wyse, DL, Brandvain, Y, Kantar, MB. 2019. Domestication in real time: The curious case of a trigenomic sunflower population. Agronomy, 9(11), 704.
25. Kantar, MB, Runck, B. 2019. Take a walk on the wild side. Nature Climate Change, 9 (10), 731–732. <http://dx.doi.org/10.1038/s41558-019-0581-y>
26. Mora, C, Rollins, R, Taladay, K, Kantar, MB, Chock, MK, Shimada, M, Franklin, EC. 2019. Limitations to estimate carbon emissions from Bitcoin mining. Nature Climate Change, 9(9), 658-659
27. Khoury, CK, Kisel, Y, Kantar, MB, Barber, E, Ricciardi, V, Klirs, C, Kucera, L, Mehrabi, Z, Johnson, N, Klabin, S, Valiño, A, Nowakowski, K, Bartomeus, I, Ramankutty, N, Miller, A, Schipanski, M, Gore, MA, Novy, A. 2019. Science - graphic art partnerships to increase research impact. Communications Biology volume 2, Article number: 295. DOI <https://doi.org/10.1038/s42003-019-0516-1>
28. Viruel, J, Conejero, M, Hidalgo, O, Pokorny, L, Powell, RF, Forest, F, Kantar, MB, Soto Gomez, MF, Graham, SW, Gravendeel, B, Wilkin, P, Leitch, IJ. 2019. A target capture-based method to estimate ploidy from herbarium specimens. Front. Plant Sci.10:937 doi: 10.3389/fpls.2019.00937
29. Del Valle-Echevarria, AR, Kantar, MB, Branca, J, Moore, S, Frederiksen, MK, Hagen, L, Hussain, T, Baumler, DJ. 2019. Aeroponic Cloning of Capsicum spp. Horticulturae 5(2), 30; <https://doi.org/10.3390/horticulturae5020030>
30. Soto Gomez, MF, Pokorny, L, Kantar, MB, Forest, F, Leitch, IJ, Gravendeel, B, Paul Wilkin, Graham, SW, Viruel, J. 2019. A customized nuclear target enrichment approach for developing a phylogenomic baseline for Dioscorea yams (Dioscoreaceae). Applications in Plant Science. ​<https://doi.org/10.1002/aps3.11254>
31. Mehrabi, Z, Pironon, S, Kantar, MB, Ramankutty, N, Rieseberg, L. 2019. Shifts in the abiotic and biotic environment of cultivated sunflower under future climate change. OCL, 26: 9. DOI: <https://doi.org/10.1051/ocl/2019003>
32. Kantar, MB, Runck, B, Raghavan, B, Joglekar, AB, Senay, S, Krohn, B, Neyhart, J, Bradeen, J, Soto Gomez, M, Kjelgren, R. 2019. The Many-Faced Janus of Plant Breeding. Plants, People, Planets. DOI: <https://doi.org/10.1002/ppp3.30>
33. Kagawa-Viviani, A, Levin, P, Johnston, E, Ooka, J, Baker, J, Kantar, MB, Lincoln, NL. 2018. I Ke Ēwe ʻĀina o Ke Kupuna: Hawaiian Ancestral Crops in Perspective. Sustainability. 10(12), 4607. <https://doi.org/10.3390/su10124607>
34. Mora, C, Spirandelli, D, Franklin, EC, Lynham, J, Kantar, MB, Miles, W, Smith, CZ, Freel, K, Moy, J, Louis, LV, Barba, EW, Bettinger, K, Frazier, A, Colburn IX, JF, Hanasaki, N, Hawkins, E, Hirabayashi, Y, Knorr, W, Little, CM, Emanuel, K, Sheffield, J, Patz, JA, Hunter, CL. 2018. Broad threat to humanity from cumulative climate hazards intensified by greenhouse gas emissions. Nature Climate Change. DOI: 10.1038/s41558-018-0315-6
35. Mora, C, Rollins, R, Taladay, K, Kantar, MB, Chock, MK, Shimada, M, Franklin, EC. 2018. Bitcoin emissions alone could push global warming above 2°C. Nature Climate Change. https://doi.org/10.1038/s41558-018-0321-8
36. Kantar, MB, Hübner, S, Herman, A, Bock, DG, Baute, G, Betts, K, Ott, M, Brandvain, Y, Wyse, D, Stupar, RM, Rieseberg, LH. 2018. Neo-Domestication of an Interspecific Tetraploid Helianthus annuus × Helianthus tuberous Population That Segregates for Perennial Habit. Genes, 9(9), 422; doi: 10.3390/genes9090422
37. Kantar, MB, Bruford, MW, and Rieseberg, LH. (2018), The Genomics of Domestication. Evol Appl. <https://doi.org/10.1111/eva.12693>
38. Stuecker MF, Tigchelaar M, Kantar MB. 2018. Climate variability impacts on rice production in the Philippines. PLOS ONE 13(8): e0201426.https://doi.org/10.1371/journal.pone.0201426
39. Taitano, N, Bernau, V, Jardón‐Barbolla, L, Leckie, B, Mazourek, M, Mercer, K, McHale , L, Michel, A, Baumler, D, Kantar, MB, van der Knaap, E. 2018. Genome‐wide Genotyping of a Novel Mexican Chile Pepper Collection Illuminates the History of Landrace Differentiation after Capsicum annuum L. Domestication. Evolutionary Applications. <https://doi.org/10.1111/eva.12651>
40. Bock, DG, Kantar MB, Caseys, C, Matthey-Doret, R, Rieseberg, LH. 2018. Evolution of invasiveness by genetic accommodation. Nature Ecology & Evolution. doi:10.1038/s41559-018-0553-z
41. Bandillo, NB, Anderson, JE, Kantar, MB, Stupar, RM, Specht, JE, Graef, GL, Lorenz, AJ. 2017. Dissecting the Genetic Basis of Local Adaptation in Soybean. Scientific Reports 7, Article number: 17195
42. Kantar, MB., Nashoba, AR, Anderson, JE, Blackman, BK, Rieseberg, LH. 2017. The Genetics and Genomics of Plant Domestication. BioScience, 67(11), 971-982.
43. Helmkampf, M., Wolfgruber, T. K., Bellinger, M. R., Paudel, R., Kantar, M.B., Miyasaka, S.C. Kimball, H., Veillet A., Read, A. and Shintaku, M. 2017. Phylogenetic relationships, breeding implications, and cultivation history of Hawaiian taro (Colocasia esculenta) through genome-wide SNP genotyping. Journal of Heredity, 1, 11.​
44. Kantar, MB, Anderson, JE, Lucht, SA, Mercer, K, Bernau, V, Case, KA, Le, NC, Frederiksen, MK, DeKeyser, HC, Wong, ZZ, Hastings, JC, Baumler, DJ. 2016. Vitamin Variation In Capsicum Spp. Provides Opportunities To Improve Nutritional Value Of Human Diets. PLoS ONE 11(8): e0161464. doi: 10.1371/journal.pone.0161464
45. DeHaan, LR, Van Tassel,DL, Anderson, J, Culman, S, Larson, S, Marks, D, Ryan, M, Wyse, D, Zhang, X, Rude, E, Poland, J, Asselin, S, Cattani, D, Dorn, K, Baute, G, Hulke, B, Kantar, MB, Ravetta, D. 2016. A Pipeline Strategy for Crop Domestication. Crop Science, 56(3), 917-930.
46. Kantar, MB, Tyl, C, Dorn, K, Zhang, X, Jungers, J, Kaser, J, Schendel, R, Eckberg, J, Runck, B, Bunzel, M, Jordan, N, Stupar, R, Marks, D, Anderson, J, Johnson, G, Sheaffer, C, Schoenfuss, T, Ismail, B, Heimpel, G, Wyse, D. 2016. Perennial Grain and Oilseed Crops. Annu. Rev. Plant Biol. 2016. 67:703–29.
47. Anderson, J, Kono, T, Stupar, R, Kantar, MB,Morrell, P. 2016. Environmental association analyses identify candidates for abiotic stress tolerance in Glycine soja, the wild progenitor of cultivated soybeans. G3; 6:835-843.
48. Curtin, SJ, Michno, JM, Campbell, BW, Gil-Humanes, J, Mathioni, S, Donohue, RC, Kantar, MB, Eamens, AL, Meyers, B, Voytas, DF, Stupar, RM. 2016. miRNA maturation and target transcript regulation are severely disrupted in soybean dicer-like1 double mutants. G3 6:423-433.
49. Kantar, MB, Khoury, C, Castañeda Alvarez, NP, Kane, N, Marek, L, Sieler, G, Camilo Sosa, C, Archicanoy, H, Bernau, V, Rieseberg, LH. 2015. Ecogeography and utility to plant breeding of the crop wild relatives of sunflower (Helianthus annuus L.). Frontiers in plant science, 6.
50. Johnson, G, Kantar, MB, Betts, K, Wyse, D. 2015. Field Pennycress Production and Weed Control in a Double Crop System with Soybean in Minnesota. Agronomy Journal. 107:532-540.
51. Runck, BC, Kantar, MB, Jordan, NR, Eckberg, JO, Barnes, RJ, Lehman, CI, DeHaan, LR, Stupar, RM, Sheaffer, CC, Porter, PM, Anderson, J, Wyse, DM. 2014. The Reflective Plant Breeding Paradigm: A Robust System of Germplasm Development to Support Strategic Diversification of Agroecosystems. Crop Science. 54:5, 1939-1948.
52. Anderson, JE, Kantar, MB, Stec, AO, Kono, TY, Song, Q, Cregan, PB, Specht, JE, Diers, BW, McHale, LK, Stupar, RM. 2014. A roadmap for functional structural variants in the soybean genome. G3. 4:1307-1318.
53. Kantar, M.B. and P.M. Porter. 2014. Relationship between planting date, growing degree days and the winter rye (Secale cereale L.) variety “Rymin” in Minnesota. Crop Management 13:–. doi:10.2134/CM-2013-0096-R
54. Kantar, M.B., G.J. Baute, D.G. Bock, L.H. Rieseberg. 2014. Genomic variation in Helianthus: Learning from the past looking to the future. Briefings in Functional Genomics. doi: 10.1093/bfgp/elu004
55. Kantar, M.B., Betts, K.., Michno, J-M.S., Luby, J.J., Morrell, P.L., Hulke, B.S., Stupar, R.M., and Wyse, D.L. 2014. Evaluating an interspecific Helianthus annuus x Helianthus tuberosus population for use in a perennial sunflower breeding program. Field Crops Research 155, 254–264.
56. Kantar, M.B., Betts, K. Hulke, B.S., Stupar, R.M., and Wyse, D. 2012. Breaking Tuber Dormancy in Helianthus tuberosus L. and Interspecific Hybrids of Helianthus annuus L. x Helianthus tuberosus. HortScience: 47:1342-1346
57. Curtin SJ, Kantar M.B., Yoon HW, Whaley AM, Schlueter JA, Stupar RM. 2012. Co- expression of soybean Dicer-like genes in response to stress and development. Funct Integr Genomics 12: 671–682.
58. Gillitzer, P., Martin, A.C., Kantar, M.B., Kauppi, K., Dahlberg, S., Lis, D., Kurle, J., Sheaffer C., and Wyse, D. 2012. Optimization of screening of native and naturalized plants from Minnesota for antimicrobial activity. Journal of Medicinal Plants Research Vol. 6(6), pp. 938–949, 16 February, 2012 DOI: 10.5897/JMPR10.710
59. Kantar, M.B., Sheaffer, C., Porter, P., Krueger, E., and Ochsner, T. E. 2011.Growth stage influences forage yield and quality of winter rye. Forage and Grazinglands doi:10.1094/FG-2011-0126-01-RS
60. Krueger, E., Ochsner, T., Kantar, M.B., Sheaffer, C., and Porter, P. 2010. Growth stage at harvest of a winter rye cover crop influences soil moisture and nitrogen. Crop Management doi:10.1094/CM-2010-1014-01-RS.

**Creative Works**

**Popular Press Articles**

1. <https://phys.org/news/2020-06-sustainable-cover-crop-farming-big-limitation.html>
2. <https://www.aaas.org/news/making-engagement-easier-others-matching-scientists-artists-and-students>
3. ​<https://www.aaas.org/programs/center-public-engagement-science-and-technology/reflections/power-infographics-pairing>
4. <https://sustainable-secure-food-blog.com/2018/09/21/yams-a-main-staple-in-africa-asia/>
5. <https://seedworld.com/michael-kantar-on-how-netflix-is-changing-plant-breeding/>
6. <https://www.theatlantic.com/science/archive/2018/08/amaizeballs/567140/>
7. [www.aaas.org/news/public-engagement-helps-scientists-tackle-global-challenges](http://www.aaas.org/news/public-engagement-helps-scientists-tackle-global-challenges)
8. <http://news.cornell.edu/stories/2018/07/workshop-trains-plant-scientists-communicate-science>
9. <https://cms.ctahr.hawaii.edu/fcs/About/NewsArticles/getting-engaged>
10. <https://news.ubc.ca/2018/05/07/genetics-help-make-a-weed-a-weed/>
11. <https://qz.com/1227435/one-plant-has-the-ability-to-help-us-understand-climate-change/>
12. <https://www.knowablemagazine.org/article/sustainability/2017/plant-reap-repeat-and-now-rethink>
13. <https://cwroftheus.wordpress.com/2015/10/08/promiscuity-provides-potential-the-sunflower-story/>
14. <https://www.cwrdiversity.org/were-becoming-more-similar-trends-in-global-diet-and-the-consequences-for-food-production-and-health/>
15. Mangan, ME, Fernandez, AL, Van Roekel, RJ, **Kantar, MB**, Kluver III RW, Yost, MA, Ries L. (2010, November). 21st Century Agriculture: Balancing Productivity and Conservation in a Changing Environment. CSA News 16-19

**Articles about lab work**

https://www.aaas.org/news/making-engagement-easier-others-matching-scientists-artists-and-students

​https://www.aaas.org/programs/center-public-engagement-science-and-technology/reflections/power-infographics-pairing

https://sustainable-secure-food-blog.com/2018/09/21/yams-a-main-staple-in-africa-asia/

www.aaas.org/news/public-engagement-helps-scientists-tackle-global-challenges

cms.ctahr.hawaii.edu/NewsLetter/surfs-up-in-montreal

news.cornell.edu/stories/2018/07/workshop-trains-plant-scientists-communicate-science

cms.ctahr.hawaii.edu/fcs/About/NewsArticles/getting-engaged

news.ubc.ca/2018/05/07/genetics-help-make-a-weed-a-weed/

qz.com/1227435/one-plant-has-the-ability-to-help-us-understand-climate-change/

www.knowablemagazine.org/article/sustainability/2017/plant-reap-repeat-and-now-rethink

https://myemail.constantcontact.com/News-from-the-Sustainable-and-Organic-Program---CTAHR.html?soid=1102675671876&aid=cF291tT5bSY

https://cwroftheus.wordpress.com/2015/10/08/promiscuity-provides-potential-the-sunflower-story/

https://www.cwrdiversity.org/were-becoming-more-similar-trends-in-global-diet-and-the-consequences-for-food-production-and-health/

**Videos about lab work**

seedworld.com/michael-kantar-on-how-netflix-is-changing-plant-breeding/

https://youtu.be/XmAxWiA9Xis ​

https://www.youtube.com/watch?v=eHBwu\_QpDTk&feature=youtu.be

https://www.aaas.org/news/public-engagement-helps-scientists-tackle-global-challenges

http://seedworld.com/michael-kantar-u-hi-evolving-plant-breeding-methods-striving-contribute-food-security/​

www.forevergreen.umn.edu/files/scie-300-so-podcast-michael-kantar-sunflower-perenniality-agriculture

https://www.youtube.com/watch?v=5QNyOcXPeFo

**Leadership Roles**

Chair National Plant Breeding Coordinating Committee (PBCC) 2019-2020

Vice-chair National Plant Breeding Coordinating Committee (PBCC) 2018-2019

Secretary National Plant Breeding Coordinating Committee (PBCC) 2017-2018

Communications officer National Plant Breeding Coordinating Committee (PBCC) 2016-2017

Grant reviewer for the National Institute of Food and Agriculture (NIFA) Agriculture and Food Research Initiative (AFRI)

National Association of Plant Breeders Graduate Student Poster Competition judge in 2016

Member the National Plant Breeding Coordinating Committee (PBCC)

Reviewer for Molecular Ecology, Reviewer for Crop Science, Reviewer for Frontiers in Plant Science, Reviewer for Nature Ecology and Evolution, Reviewer Evolutionary Applications, Reviewer for Ecology and Evolution, Reviewer for Scientific Reports, Reviewer for Agronomy Journal, Reviewer for PLOS, Reviewer for Nature Climate Change, Reviewer for Proceedings of the Royal Society B, Reviewer for Genes/Genomes/Genetics, Reviewer for Genetics, Reviewer for Briefings in Functional Genomics, Reviewer for Biology

**Graduate Students**

Category Current Number of Students Number Graduated (Career)

*Chair* of Master’s Committees 2 5

*Chair* of PhD Committees 3 0

Member of Master’s Committees 7 5

Member of PhD Committees 6 2

**Grant Support**

Title of Grant: *Continuation of Breeding Program for Stevia*

Source of Grant: Sweet Green Fields LLC,

Total Dollar Value: $665,000 ($335,000)

Dates of Grant: 2021

Role: CoPI

Title of Grant: Genetic controls and mechanisms for the recruitment of crop microbiomes for enhanced ecosystem adaptation

Source of Grant: USDA

Total Dollar Value: $748,330

Dates of Grant: 2020

Role CoPI

Title of Grant: Hoʻākamai! Building Expertise In Fact Using Active Learning (BE-FACTUAL)

Source of Grant: USDA

Total Dollar Value: $491,851.88

Dates of Grant: 2019

Role CoPI

Title of Grant: Computational Agroecology

Source of Grant: Schmidt Family Foundation

Total Dollar Value: $300,000 ($150,000)

Dates of Grant: 2019

Role CoPI

Title of Grant: Development of a new perennial grain crop

Source of Grant: Bard Senior research fellowship, BARD

Total Dollar Value: $8000

Dates of Grant: 2019

Role: PI

Title of Grant: *Establishment of Breeding Program for Stevia*

Source of Grant: Sweet Green Fields LLC,

Total Dollar Value: $538,500 ($238,000)

Dates of Grant: 2019

Role: CoPI

Title of Grant: *The power of infographics*

Source of Grant: Leichtag Foundation

Total Dollar Value: $10000

Dates of Grant: 2019

Role: PI

Title of Grant: *Genetic structure and mechanisms of drought adaptation in Capsicum*

Source of Grant: USDA

Total Dollar Value: $475,000 ($31000)

Dates of Grant: 2017

Role: CoPI

Title of Grant: *Toward breeding of Silphium Integrifolium*

Source of Grant: The Land Institute

Total Dollar Value: $200,084.70

Dates of Grant: 2015

Role: CoPI

Title of Grant: *Utilizing Population Genomics to speed the domestication of Silphium Integrifolium*

Source of Grant: The Land Institute

Total Dollar Value: $201,816

Dates of Grant: 2015

Role: CoPI

Title of Grant: *Development of perennial sunflower for food production and wildlife services*

Source of Grant: Forever Green Initiative: Minnesota variety development fund

Total Dollar Value: $201,816

Dates of Grant: 2015

Role: CoPI

**Presentations at Conferences**

Title: Agroecological Transition Functions

Authors: Michael Kantar, Adam Streed, Barath Raghavan, Patrick Ewing\*, Bryan Runck Diane Wang

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: San Antonio, Texas

Date of Presentation: 2019

Title: The home field advantage of modern plant breeding,

Authors: Patrick Ewing\*, Bryan Runck Thomas Kono, Michael Kantar

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: San Antonio, Texas

Date of Presentation: 2019

Title: *Spatial Efficiency of Plant Breeding*

Authors: Michael Kantar\*, Bryan Runck, Barath Raghavan

Name of Conference: Sustainability

Location: Vancouver, British Columbia

Date of Presentation: 2019

Title: Plant Breeding Coordinating Committee survey of US Public Plant Breeding Capacity

Authors: Sarah Kostick\*, Ksenjia Gasic, Kate Evans, Michael Kantar

Name of Conference: ASHS Annual Conference

Location: Las Vegas, NV

Date of Presentation: 2019

Title: Plant Breeding Coordinating Committee survey of US Public Plant Breeding Capacity

Authors: Todd Anderson\*, Ted Radovich, JP Bingham, Michael Kantar

Name of Conference: ASHS Annual Conference

Location: Las Vegas, NV

Date of Presentation: 2019

Title: Conservation and Use of the North American Plant Cornucopia: The Way Forward

Authors: Colin Khoury\*, Michael Kantar, Stephanie Green, Kate Williams, Laura Marek

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: Baltimore, MD

Date of Presentation: 2018

Title: Environmental Association Analysis of Diverse Chile Peppers (Capsicum spp.) for Abiotic Stress Tolerance

Authors: Vivian Bernau\*, Kristin Mercer, Leah McHale Michael Kantar

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: Baltimore, MD

Date of Presentation: 2018

Title: Environmental Association Analysis of Diverse Chile Peppers (Capsicum spp.) for Abiotic Stress Tolerance

Authors: Juan Viruel\*, Marybel Soto Gomez, Sean Graham, Michael Kantar

Name of Conference: 6th Monocots Congress

Location: Natal, Brazil

Date of Presentation: 2018

Title: U.S. Public Plant Breeding Capacity

Authors: Ksenjia Gasic, Kate Evans, Michael Kantar\*

Name of Conference: National Association of Plant Breeders

Location: Guelph, Canada

Date of Presentation: 2018

Title: Sustaining the Future of U.S. Plant Breeding

Authors: Ksenjia Gasic, Kate Evans, Michael Kantar\*

Name of Conference: National Association of Plant Breeders

Location: Guelph, Canada

Date of Presentation: 2018

Title: *Phylogenomics of the Dioscorea Yams, a Major Pantropical Crop*

Authors: Marybel Soto Gomez\*, Juan Viruel, Sean Graham, Michael Kantar

Name of Conference: Botany

Location: Rochester, MN

Date of Presentation: 2018

Title: Genetic Diversity of `Uala (Sweet Potato) in Hawai`i

Authors: Elizabeth Winnicki\*, Ted Radovich, Aurora Kagawa-Viviani, Michael Kantar

Name of Conference: ASPB

Location: Montreal, Quebec, Canada

Date of Presentation: 2018

Title: *Evolution of Invasiveness by Genetic Accommodation in a Perennial Sunflower*

Authors: Dan Bock\*, Michael Kantar, Loren Rieseberg

Name of Conference: Plant and Animal Genome XXVI

Location: Montreal, San Diego, CA

Date of Presentation: 2018

Title: *Phylogenomics of the Dioscorea Yams, a Major Pantropical Crop*

Authors: Marybel Soto Gomez\*, Juan Viruel, Sean Graham, Michael Kantar

Name of Conference: Plant and Animal Genome XXVI

Location: San Diego, CA

Date of Presentation: 2018

Title: *Sustaining the Future of Plant Breeding*

Authors: Ksenjia Gasic, Kate Evans, Michael Kantar\*

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: Tampa, FL

Date of Presentation: 2017

Title: Genetic Improvement of Taro for taro leaf blight resistance in Hawai’i

Authors: Roshan Paudel\*, Michael Kantar, Susan Miyasaka, Mike Shintaku

Name of Conference: ASHS Annual Conference

Location: Waikola Hawaii

Date of Presentation: 2017

Title: Exploring the Genetic Diversity of Hawaiian Sweet Potato

Authors: Renee Bellinger\*, Roshan Paudel, Michael Kantar, Susan Miyasaka, Mike Shintaku

Name of Conference: ASHS Annual Conference

Location: Waikola Hawaii

Date of Presentation: 2017

Title: Improvement of Fruit Quality & Insect Tolerance in Pumpkin Varieties for Hawaiian Markets

Authors: Alex Campbell\*, Ted Radovich, Michael Kantar

Name of Conference: ASHS Annual Conference

Location: Waikola Hawaii

Date of Presentation: 2017

Title: Sustaining the Future of U.S. Plant Breeding

Authors: Ksenjia Gasic, Kate Evans, Michael Kantar\*

Name of Conference: National Association of Plant Breeders

Location: Davis, CA

Date of Presentation: 2017

Title: *Controlled Crossing within Acacia koa A. Gray*

Authors: Del Valle-Echevarria\*, Michael Kantar, Susan Miyasaka

Name of Conference: ASPB

Location: Honolulu, HI

Date of Presentation: 2017

Title: Sustaining the Future of U.S. Plant Breeding

Authors: Ksenjia Gasic, Kate Evans, Michael Kantar\*

Name of Conference: ASPB

Location: Honolulu, HI

Date of Presentation: 2017

Title: *Revisiting a wild perennial sunflower hybrid swarm*

Authors: Adam Herman\*, Michael Kantar, Yaniv Brandvain

Name of Conference: ASPB

Location: Portland Oregon

Date of Presentation: 2017

Title: *Exploring local adaptation in crop wild relatives*

Authors: Michael Kantar\*, Roshan Paudal, Susan Miyasaka, Michael Shintaku

Name of Conference: Sustainability

Location: Davis, California

Date of Presentation: 2017

Title: Vitamin Variation In Capsicum Spp. Provides Opportunities To Improve Nutritional Value Of Human Diets

Authors: Justin Anderson\*, Michael Kantar, Kristin Mercer, David Baumler

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: Phoenix, AZ

Date of Presentation: 2016

Title: Use of pseudo-reference genomes to improve genotyping-by-sequencing of taro (Colocasia esculenta)

Authors: Susan Miyasaka\*, Mike Shintaku, Michael Kantar

Name of Conference: ASHS Annual Conference

Location: Atlanta, GA

Date of Presentation: 2016

Title: Environmental association analyses identify candidates for abiotic stress tolerance in Glycine soja, the wild progenitor of cultivated soybeans

Authors: Justin Anderson\*, Tom Kono, Robert Stupar, Peter Morrell, Michael Kantar

Name of Conference: Plant and Animal Genome XXIV

Location: San Diego, CA

Date of Presentation: 2016

Title: Environmental association analyses identify candidates for abiotic stress tolerance in Glycine soja, the wild progenitor of cultivated soybeans

Authors: Justin Anderson\*, Tom Kono, Robert Stupar, Peter Morrell, Michael Kantar

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: Phoenix, AZ

Date of Presentation: 2016

Title: *The Search for Functional Structural Variants and Adaptive Traits in Soybean*

Authors: Justin Anderson\*, Tom Kono, Robert Stupar, Michael Kantar

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: San Diego, CA

Date of Presentation: 2016

Title: Leveraging interdisciplinary collaborations to develop new crops and re-imagine traditional ones

Authors: Michael Kantar\*, Colin Khoury, Robert Stupar, Donald Wyse

Name of Conference: ASA-CSSA-SSA International Annual Meeting

Location: Minneapolis, MN

Date of Presentation: 2015