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KRISTIN M. TRIPPE. PH.D.

CURRICULUM VITAE

EDUCATION

Oregon State University — Corvallis, Oregon
Ph.D. in Botany and Environmental Engineering — May 2007
Dissertation Advisor: L.M. Ciuffetti (Botany) and K.J. Williamson (Environmental Eng)
Dissertation Title: "Characterization of the Molecular Foundations and Biochemistry of Alkane and Ether Oxidation in a Filamentous Fungus, a *Graphium* species"

Oregon State University — Corvallis, Oregon
Bachelor of Science in Botany and Plant Pathology — March 2000
Magna Cum Laude

AREAS OF SPECIALIZATION

Soil Ecology & Microbiology
Microbial Biochemistry
Biochar & Soil Amendments
Microbial genetics & molecular biology
Restoration of Marginal Lands
Soil Health

CURRENT RESEARCH

My current research in applied soil microbiology and soil restoration is focused on understanding and describing microbial processes, populations, and management practices that lower costs, increase yields, and provision ecosystem services.

PROFESSIONAL AFFILIATIONS

American Society of Microbiologists
Soil Science Society of America
Crop Science Society of America
Agronomy Society of America
US Biochar Initiative
International Biochar Initiative
Soil Ecology Society

POSITIONS HELD

Research Microbiologist **08/2013 - present**
U.S. Department of Agriculture
Agricultural Research Service
Forage Seed and Cereals Research Unit, Corvallis, Oregon

Courtesy Faculty **08/2015-present**
Oregon State University
Department of Crop and Soil Sciences

Research Molecular Biologist **08/2011 - 08/2013**
Postdoctoral Researcher
Forage Seed and Cereals Research Unit, Corvallis, Oregon
Supervisor: Gary Banowetz

Science to Achieve Results (STAR) Graduate Fellow **10/2003 – 09/2006**
Environmental Protection Agency
Oregon State University
Department of Botany and Plant Pathology, Corvallis, Oregon

Graduate Research Fellow **03/2000 – 09/2003**
Oregon State University **and**
Department of Botany and Plant Pathology **10/2006 – 05/2007**
Department of Environmental Engineering
Corvallis, Oregon

PUBLICATIONS

Non-refereed Publications: (*senior author, italicized names are post-doctoral or graduate trainees; maiden name: Skinner)

1. **Trippe, K.,** Aller, D., Gray, M., Delaney, M., Smith, B., *Baschieri, R.,* Miles, T., Slezak, K., and Cawood, L. 2024. Interpreting Biochar Lab Analyses. United States Biochar Initiative. (Available in English and Spanish)
2. *Bachschieri, R.*, Aller, D., Semen-Varner, R., Mobius-Clune, B., Miles, T., and **Trippe, K.M.** Frequently Asked Questions About Biochar Applied to Soil. American Farmland Trust. 2024. Available at: https://farmlandinfo.org/publications/frequently-asked-questions-about-biochar/ (white paper/frequently asked question)
3. **Trippe, K.M.** In a library of information, how can farmers flip through the index? Washington State Soil Health initiative Blog. 2024. Available at: https://washingtonsoilhealthinitiative.com/2024/08/biochar-in-a-library-of-information-how-can-farmers-flip-through-the-index/
4. *Phillips, C.M.* and **Trippe, K.M**. A burning need for liming amendments on the Palouse. 2024. Washington State Soil Health initiative Blog. Available at https://washingtonsoilhealthinitiative.com/2024/06/a-burning-need-for-liming-amendments-on-the-palouse/

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5. Aller, D., **Trippe, K**., Smith, B., Seman-Varner, R., Delaney, M., Miles, T. 2023. Biochar Guidelines for Agricultural Applications: Practical insights for applying biochar to annual and perennial crops. Part 1. United States Biochar Initiative.
6. Aller, D., **Trippe, K.,** Smith, B., Seman-Varner, R., Baschieri, R, Delaney, M., Miles, T. 2023. Beyond Application: Learning More About Biochar. Biochar assistance, persistence, and barriers to adoption. United States Biochar Initiative.
7. Delaney, M., **Trippe, K.M.,** Cawood, L., Hegburg, C., and Kingery, H. Biochar Improves Manure Management: Good for the Animals, Good for the Environment. United States Biochar Initiative. 2023. https://biochar-us.org/sites/default/files/learning/files/USBI_DFB_Manure-Factsheet.pdf
8. Delaney, M, **Trippe, K.M.,** Cawood, L., and Kingery, H. Biochar Increases Plant Survival: Use Less Water, Increase yields. United States Biochar Initiative. 2022. Available at: https://biochar-us.org/sites/default/files/learning/files/USBI_DFB_Biochar_Increases_Plant_Survival.pdf
9. Delaney, M, **Trippe, K.M.,** Cawood, L., and Kingery, H. Biochar in Compost: Improve Compost and Save Money. United States Biochar Initiative. 2021. Available at: https://biochar-us.org/sites/default/files/learning/files/USBI_DFB_Compost-sheet_DIGITAL2.pdf
10. Delaney, M, **Trippe, K.M.**, Cawood, L., Hegburg, C., and Kingery, H. Filter Pollutants with Biochar; Cleaner Water at Less Cost. United States Biochar Initiative. 2022. Available at: https://biochar-us.org/sites/default/files/learning/files/USBI_DFB_stormwater-factsheet_DIGITAL-rev-Dec22.pdf
11. Delaney, M, **Trippe, K.M.,** Cawood, L., Hegburg, C., and Kingery, H. Biochar Removes Carbon: Carbon Markers Offer a New Opportunity for Biochar. United States Biochar Initiative. 2022. Available at: https://biochar-us.org/sites/default/files/learning/files/USBI_DFB_Carbon_factsheet.pdf
12. Amonette, J.E., J.G. Archuleta, M.R. Fuchs, K.M. Hills, G.G. Yorgey, G. Flora, J. Hunt, H.-S. Han, B.T. Jobson, T.R. Miles, D.S. Page-Dumroese, S. Thompson, **K.M. Trippe**, K. Wilson, R. Baltar, K. Carloni, C. Christoforou, D.P. Collins, J. Dooley, D. Drinkard, M. Garcia-Pérez, G. Glass, K. Hoffman-Krull, M. Kauffman, D.A. Laird, W. Lei, J. Miedema, J. O'Donnell, A. Kiser, B. Pecha, C. Rodriguez-Franco, G.E. Scheve, C. Sprenger, B. Springsteen, and E. Wheeler. 2021. *Biomass to Biochar: Maximizing the Carbon Value.* Report by Center for Sustaining Agriculture and Natural Resources, Washington State University, Pullman WA. csanr.wsu.edu/biomass2biochar
13. **Trippe, K.M**, Yorgey, G.M.*, Laird, D.A., Pecha,B., and Drinkard, D. Chapter 8: Agricultural Use *in Biomass to Biochar: Maximizing the Carbon Value.* Report by Center for Sustaining Agriculture and Natural Resources, Washington State University, Pullman WA.

PUBLICATIONS (Continued)

14. **Trippe, K.,** 2021. Work–Life Balance: Finding Strategies to Manage It All. *CSA News*, *66*(6), pp.34-35. 2021.
15. *Garcia-Jaramillo, M.,* **Trippe, K.M**., Levin, A. Establishing Sustainable Biochar-based Vineyard Practices in Grape Production. Vine to Wine. March 2019.
16. **Trippe, K.M.** Biochar: what can it do for your soil? Ag Climate Network. Available at: https://www.agclimate.net/2018/04/26/biochar-what-can-it-do-for-your-soil/
17. **Trippe, K.M.**, *Phillips, C.,* Spokas, K. and Miles, T., Creating a Biochar Roadmap. *Crops, Soils, Agronomy News*, 63(10), pp.24-25. 2018.
18. **Trippe, K.M.** and *Phillips, C.L*. Development of a Pacific Northwest Biochar Atlas: Translating biochar study results into usable grower information. *Crops and Soils,* 51(4), pp.24-27. 2018.
19. **Trippe, K.M**. and Smith, D. Can biochar link forest restoration with commercial agriculture? in "Biochar: Production, Characterization and Applications", Franco Berruti, Western University, London, Ontario, Canada Raffaella Ocone, Heriot-Watt University, Edinburgh, UK Ondrej Masek, University of Edinburgh, Edinburgh, UK Eds, ECI Symposium Series, 2017. http://dc.engconfintl.org/biochar/26 (Conference Proceedings).
20. Sessions, J., **Trippe, K.M.**, Machado, S., Zamora, R. Campbell, J., Bailey, J., Smith, D. Opportunities for biochar production to reduce forest wildfire hazard, sequester carbon, and increase agricultural productivity of dryland soils. Proceedings of the XIV World Forestry Congress, Durban, South Africa, 2015. (Conference Proceedings)
21. **Skinner, K.M.** Characterization of the molecular foundations and biochemistry of alkane and ether oxidation in a filamentous fungus, a *Graphium* species. Oregon State University (Corvallis, OR) 152 p. 2007. (Ph.D. Dissertation)
22. Martinez Prado A., **Skinner K.,** Ciuffetti L.M., Williamson K.J. MTBE kinetics by n-alkane-grown *Mycobacterium vaccae* and *Graphium sp*. In: Batelle (ed) *Third International Conferenc*e on *Remediation of chlorinated and recalcitrant compounds,* Session E9: MTBE characterization and treatment. Monterey, CA, 2002. (Conference Proceedings)

Refereed Publications and Patents:

1. Reardon, C. L., **Trippe, K. M.,** and Manning, V.A. Bioluminescent sensor for isothiocyanates. U.S. Patent No. 12,117,402, issued 10/15/24
2. Manning, V.A., Moore, P.A., and **Trippe, K.M.** Metagenome-assembled genomes of an acid-tolerant nitrifying bacterial community isolated from a bioreactor used in ammonium scrubbers at animal rearing facilities. Microbial Resource Announcements. 2024. pp.e00386-24.
3. Johnson, M.G., Olszyk, D.M., Bollman, M.A., Nash, M.S., Manning, V.A., **Trippe, K.M.,** Watts, D.W. and Novak, J.M. Amendments Promote Douglas-fir Survival: Formosa Mine Tailings Case Study**.** *Journal of Environmental Quality,* 2024; 53, p. 553–564 https://doi.org/10.1002/jeq2.20587

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4. *Domnariu, H.,* Reardon, C.L., Manning, V.A., Gollany, H.T. and **Trippe, K.M.** Legume cover cropping and nitrogen fertilization influence soil prokaryotes and increase carbon content in dryland wheat systems. *Agriculture, Ecosystems, and Environment,* 2024; 367, p.108959
5. *Breza, L.*C, Moore, J.M., Tomasek, A.A., and **Trippe, K.M.** Soil Carbon Stock Response to Subsurface Drainage in the North Willamette Valley In: *2023 Seed Production Research Reports*. N. Anderson, A.G. Hulting, D. Walenta, and C. Mallory-Smith, Eds., Oregon State University Extension and USDA-ARS, Corvallis, OR. 2024; p. 11-14**.**
6. Ippolito, J.A., Ducey, T.F., Spokas, K.A. **Trippe, K.M.,** and Johnson, M.G. A biochar selection method for remediating heavy metal contaminated mine tailings. *International Journal of Environmental Science and Technology,*2024; 1-12.
7. *Gonzalez Mateu, M*., *Domnariu,H.*, Moore, A., and **Trippe, K.M.** Soil Health, Microbial Communities, and Annual Ryegrass Yield in Soils Under Contrasting Management Practices. *Agronomy Journal.* 2023. *In press.*
8. Johnson, M.J., Olszyk, D., Shiroyamab, T., Bollman, M., Manning, V., **Trippe, K.M.**, Watts, and D., Novak, J. Designing Amendments to Improve Plant Performance for Mine Tailings Revegetation. *Agrosystems, Geosciences, and Environment.* 6(3); e20409. 2023. DOI: 10.1002/agg2.20409
9. Gent, D.H., Block, M., Massie, S.T., *Phillips, C.L*., Richardson, B.J., Shellhammer, T.H., **Trippe, K.M.** and Wiseman, M.S., Nitrogen and Sulfur Fertility Practices: Influences on Hop Chemistry, Aroma, and Nitrate Accumulation. *Journal of the American Society of Brewing Chemists*. 18:1-11. 2023. DOI:10.1080/03610470.2023.2204412
10. *Breza, L.C,* Moore, J.M., Tomasek, A.A., and Trippe, K.M. **The effect of subsurface drainage in grass seed fields on soil carbon stocks.** In: *2022 Seed Production Research Reports*. N. Anderson, A.G. Hulting, D. Walenta, and C. Mallory-Smith, Eds., Oregon State University Extension and USDA-ARS, Corvallis, OR, pp. 15-20. 2023.
11. Reardon, C.L., **Trippe, K.M.** and Manning, V., US Department of Agriculture USDA, 2023. *Bioluminescent sensor for isothiocyanates*. U.S. Patent Application 17/386,917.
12. Lescallette, A.R., Dunn, Z.D., Manning, V.A., **Trippe, K.M**. and Li, B. Biosynthetic Origin of Formylaminooxyvinylglycine and Characterization of the Formyltransferase GvgI. *Biochemistry*. 61(19):2159-2164. 2022. DOI:10.1021/acs.biochem.2c00374
13. *Sales, B.K*., Bryla, D.R., **Trippe, K.M.,** Scagel, C.F., Strik, B.C. and Sullivan, D.M. Biochar as an Alternative Soil Amendment for Establishment of Northern Highbush Blueberry. *HortScience*. 57(2):277-285. 2022. DOI:10.21273/HORTSCI16257-21
14. *Phillips, C.L.,* Meyer, K.M., Garcia-Jaramillo, M., Weidman, C.S., Stewart, C.E., Wanzek, T., Grusak, M.A., Watts, D.W., Novak, J. and **Trippe, K.M.,** Towards

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predicting biochar impacts on plant-available soil nitrogen content. *Biochar*. 4(1):1-15. 2022. DOI:10.1007/s42773-022-00137-2

15. **Trippe, K.M**., *Gonzalez Mateu, M.* , *Zamora, C.,* Manning,V.A., Anderson, N.P., Verhoeven, E. and Moore, A. Postharvest straw management practices do not impact carbon stocks in tall fescue produced for seed. In: *2021 Seed Production Research Reports*. N. Anderson, A.G. Hulting, D. Walenta, and C. Mallory-Smith, Eds., Oregon State University Extension and USDA-ARS, Corvallis, OR, **pp. 8-11**. 2022.
16. *García-Jaramillo, M*., Spokas, K., Levin, A., Osborne, J., Meyer, K.M., *Phillips, C.,* Acosta-Martínez, V., **Trippe, K.M**. Sustainable biochar-based vineyard practices: effects on soil functions, vine growth and productivity, and grapes and wine quality. *Biochar.* 3:565–577 2021. DOI:10.1007/s42773-021-00118-x
17. *Frewert, A*., **Trippe, K.M**., Cheek, T.E. Can locally-sourced inoculum and biochar synergistically improve the establishment of mycorrhizal fungi in mine tailings? *Restoration Ecology*. 30(3):e13518. 2021. DOI:10.1111/rec.13518
18. Davis, E.W., *Okrent, R.A.,* Manning, V.A., **Trippe, K.M.** Distribution and diversity of the 4-formylaminooxyvinylglycine biosynthetic pathway in Pseudomonas. *PloS One.* 16(4):e0247348. 2021. https://DOI.org/10.1371/journal.pone.0247348
19. Manning, V.A., **Trippe, K.M**. Absence of 4-formylaminooxyvinylglycine production results in resource reallocation from secondary metabolite production to processes involved in rhizosphere colonization. *Microbiology*. 9(4):717. 2021. https://DOI.org/10.3390/microorganisms9040717.
20. **Trippe, K.M**, Meyer, K.M., Watts, D., Novak, J.M. and *Garcia-Jaramillo. M.* Biochar: an alternative to activated carbon for the establishment of Perennial Ryegrass. In: *2020 Seed Production Research Reports*. N. Anderson, A.G. Hulting, D. Walenta, and C. Mallory-Smith, Eds., Oregon State University Extension and USDA-ARS, Corvallis, OR, pp. 50-53. 2021.
21. *Phillips, C. L.,* **Trippe, K.M.,** Kwon, H., Murphy, B., Moore, W., Hanson, C. V., Law,B., and Schmidt, A. Annual carbon balance of a second-year tall fescue seed crop. In: *2020 Seed Production Research Reports*. N. Anderson, A.G. Hulting, D. Walenta, and C. Mallory-Smith, Eds., Oregon State University Extension and USDA-ARS, Corvallis, OR, pp. 8-11. 2021.
22. **Trippe, K.M**., Manning, V.A., Reardon C.L., Klein, Weidman, C, Ducey, T., Novak, J., Watts, D., Johnson, M., Spokas, K., and Ippolito, J.A.. Locally effective microbes influence plant growth, soil chemistry, and microbial community composition in biochar-amended mine tailings. *Applied Soil Ecology.* 165: 103962. 2021. DOI:10.1016/j.apsoil.2021.103962.
23. *Phillips, C. L.,* Meyer, K. M., Hanson, C. V., Biraud, S. C., **Trippe, K. M**. Manipulating rangeland soil microclimate with juniper biochar for improved native seedling establishment. *Soil Science Society of America Journal*. 85(3):1-15. 2021. DOI:10.1002/saj2.20207.
24. Gent, D.H., Claassen, B.H., Massie, S.T., *Phillips, C.L.*, Shellhammer, T.H., **Trippe, K.M**., Towmey, M.C. Delayed Early Season Irrigation: Impacts on Hop Yield and

PUBLICATIONS (Continued)

Quality. *Journal of the American Society of Brewing Chemists*. 21:1-4. 2021. DOI:10.1080/03610470.2021.1915053

25. Ducey, T.F., Novak, J.M., Sigua, G.C., Ippolito, J.A., Rushmiller, H.C., Watts, D., **Trippe, K.M.**, Spokas, K.A., and Johnson, M.G. *Microbial response to designer biochar and compost treatments in remediated, mine-impacted soils of the Oronogo-Duenweg Mining Belt. Biochar*. 7:1-16. 2021. DOI:10.1007/s42773-021-00093-3
26. Strimbu, B., Mueller-Warrant, G., **Trippe, K.M.** *Agricultural crop change in the Willamette Valley, Oregon, from 2004 to 2017.* Data 6(2):17-25. 2021. DOI:10.3390/data6020017.
27. *Sales, B*., Bryla, D., **Trippe, K.,** Weiland, J., and Scagel, C., Amending a Sandy Soil with a Woody Biochar Promotes Plant Growth and Root Colonization by Mycorrhizal Fungi in Highbush Blueberry. *HortScience*. 55(3):353-361. 2020. DOI:10.21273/HORTSCI14542-19
28. *Phillips, C.L., Meyer, K.M., **Trippe, K.M**.* Is biochar applied as surface mulch beneficial for grassland restoration? *Geoderma.* 375:114457. 2020. DOI:10.1016/j.geoderma.2020.114457
29. *Phillips, C. L.,* Light, S. E., Lindsley, A., Wanzek, T., Meyer, K., & **Trippe, K. M.** Preliminary evaluation of a decision support tool for biochar amendment. *Biochar*. 2:93-105. 2020. DOI:10.1007/s42773-020-00037-3
30. *Phillips, C. L.,* Light, S. E., Gollany, H. T., Chiu, S., Wanzek, T., Meyer, K., & **Trippe, K. M.** Can biochar conserve water in Oregon agricultural soils?. *Soil and Tillage Research*. 198:104525. 2020. DOI:10.1016/j.still.2019.104525
31. *Garcia-Jaramillo,M.,* **Trippe, K.M**., Helmus, R., Knicke, H.E., Cox, L., Hermosin, M.C., Parsons, J.R.,Kalbitz, K. An Examination of the Role of Biochar and Biochar Water-Extractable Substances on the Sorption of Ionizable Herbicides in Rice Paddy Soil. *Science of the Total Environment.* 706:135682. 2019. DOI:10.1016/j.scitotenv.2019.135682
32. Mueller-Warrant, G.W., **Trippe, K.M.,** and McDonnell, R.J. Timing of slug emergence in new perennial ryegrass plantings. In: *2018 Seed Production Research*, eds. N. Anderson, A.G. Hulting, and D. Walenta, Oregon State University Extension and USDA-ARS, Corvallis, OR, pp. 33-35. 2019.
33. Mueller-Warrant, G.W., **Trippe K.M.,** and Jessie, W.P. Spatial variation in roughstalk bluegrass affects tall fescue seed yield. In: *2018 Seed Production Research*, eds. N. Anderson, A.G. Hulting, and D. Walenta, Oregon State University Extension and USDA-ARS, Corvallis, OR, pp. 9-11. 2019.
34. Kharel, G., Sacko, O., Feng, X., Morris, J. R., *Phillips, C. L.,* **Trippe, K.,** Kumar, S., and Lee, J. W. Biochar Surface Oxygenation by Ozonization for Super High Cation Exchange Capacity. *ACS Sustainable Chemistry & Engineering*, 7(19):16410-16418. 2019. DOI:10.1021/acssuschemeng.9b03536
35. Iskra, A.E., Lafontaine, S.R., **Trippe, K.M.**, Massie, S., *Phillips, C.*, Twomey, M.C., Shellhammer, T.H., and Gent, D.H. Influence of Nitrogen Fertility Practices on Hop Cone Quality. *Journal of the American Society of Brewing Chemists.* 77(3):1-11. 2019. DOI:10.1080/03610470.2019.1616276

PUBLICATIONS (Continued)

36. Mueller Warrant, G., *Phillips, C.L.,* **Trippe, K.M.** Use of SWAT to model impact of climate change on sediment yield and agricultural productivity in western Oregon, USA. *Open Journal of Modern Hydrology.* 9(02):54. 2019. DOI:10.4236/ojmh.2019.92004
37. Smith D.N., Williams, A.N., Verrett, J.N., Bergbusch, N.T., Manning, V.A., **Trippe, K.M.**, Stavrinides, J. Resistance to Two Vinylglycine Antibiotic Analogs Is Conferred by Inactivation of Two Separate Amino Acid Transporters in *Erwinia amylovora*. *Journal of Bacteriology.* 201(9):e00658-18. 2019. DOI:10.1128/jb.00658-18
38. Sessions, J., Smith, D., **Trippe, K.M.,** Fried, J., Bailey, J., Petitmermet, J., Hollamon, W., *Phillips*, *C.L.*, Campbell, J. Can Biochar Link Forest Restoration with Commercial Agriculture? *Biomass and Bioenergy.* 123:175-185. 2019 DOI:10.1016/j.biombioe.2019.02.015
39. Novak, J. M., Ippolito, J. A., Ducey, T. F., Watts, D. W., Spokas, K. A., **Trippe, K. M.,** Sigua, G.C., and Johnson, M. G. Remediation of an acidic mine spoil: Miscanthus biochar and lime amendment affects metal availability, plant growth, and soil enzyme activity. *Chemosphere*, *205*, 709-718. 2018.
40. **Okrent R.A.,* **Trippe, K.M.,** Manning, V.M., Walsh, C. Detection of 4-formylaminooxyvinylglycine in *Pseudomonas fluorescens* WH6 and *Pantoea ananatis* BRT175 by laser absorption electrospray ionization-mass spectrometry (LAESI-MS). *PLOS One.* 2018.
41. **Phillips, C.L.*, **Trippe, K**., Reardon, C., Mellbye, B.M., Griffith, S.M., Banowetz, G.M. 2018. Physical feasibility of biochar production and utilization at a farm-scale: a case-study in non-irrigated seed production. *Biomass and Bioenergy.* 108:244-251. 2018.
42. **Okrent, R. A.,* Manning, V. A., and **Trippe, K. M.** Draft genome sequences of seven 4-formylaminooxyvinylglycine producers belonging to the *Pseudomonas fluorescens* species complex. *Genome announcements*, *5*(18), e00277-17. 2017.
43. Mueller-Warrant, G.W., **Trippe, K.M.,** Anderson, N.P., and Sullivan, C.S. An 11-year history of crop rotation into new perennial ryegrass and tall fescue. In: 2016 Seed Production Research, eds. N. Anderson, A.G. Hulting, D. Walenta, and M. Flowers, Oregon State University Extension and USDA-ARS, Corvallis, OR, pp. 9-14. (available online at http://cropandsoil.oregonstate.edu/system/files/u1473/Mueller_rotation.pdf) 2017.
44. Mueller-Warrant, G.W., Anderson, N.P., Sullivan C.S., and **Trippe, K.M.** Spatial variability in slug emergence patterns: third-year results. In: 2016 Seed Production Research, eds. N. Anderson, A.G. Hulting, D. Walenta, and M. Flowers, Oregon State University Extension and USDA-ARS, Corvallis, OR, pp. 41-45. (available online at http://cropandsoil.oregonstate.edu/system/files/u1473/Mueller_rotation_0.pdf) 2017.

45. **Okrent R.A.,* **Trippe, K.M,** Maselko, M., Manning, V**.** Functional analysis of a biosynthetic cluster essential for production of the germination-arrest factor FVG in *Pseudomonas fluorescens* WH6. *Microbiology* 163(2):207-217. 2017.
46. Mueller-Warrant, G.W., **Trippe, K.M.,** Whittaker, G.W., Anderson, N.P. and Sullivan, C.S. Spatial methods for deriving crop rotation history. *International Journal of Applied Earth Observation and Geoinformation*, *60*, pp.22-37. 2016.
47. *Mueller-Warrant,G.W.*,* Whittaker, G.W. and **Trippe, K.M**. Identifying stand age distributions and crop rotation patterns from 11 years of remote sensing data. Agronomy Journal. *108:*2239-2234. 2016.
48. Novak, J.M., Ippolito, J.A., Lentz, R.D. ,Spokas, K.A., Bolster, C. H., K. Sistani, K., **Trippe K.M**., *Phillips, C.L.,* and Johnson, M.G. Soil health, crop productivity, microbial transport, and mine spoil response to biochars. *BioEnergy Research.* 9(2):454-464*.* 2016.
49. **Phillips, C.L.,* **Trippe, K.M.**, Griffith, S.M., Whittaker, G.W., and Banowetz, G.M.; Biochar from gasified grass and wood facilitates plant establishment in acid mine soils. *Journal of Environmental Quality. 45*:1013-1020*.* 2016
50. Mueller-Warrant, G.W., Anderson, N.P., Sullivan, C.S., Whittaker, G.W. and **Trippe, K.M.** Spatial variability of slug populations in perennial ryegrass stand establishment: Second-year results. 2015 Oregon State University Seed Production Research Report, Department of Crop and Soil Sciences, (available online at https://agsci.oregonstate.edu/sites/agscid7/files/crop-soil/Mueller_slug_populations.pdf) 2015.
51. ***Trippe, K. M**., Griffith, S. M., Banowetz, G. M., and Whitaker, G. W.; Changes in Soil Chemistry following Wood and Grass Biochar Amendments to an Acidic Agricultural Production Soil. *Agronomy Journal 107(4)* p1440-1446. 2015.
52. ***Trippe, K. M.,** Griffith, S. M., Banowetz, G. M., and Whitaker, G. W.; Biochars Derived from Gasified Feedstocks Increase the Growth and Improve Nutrient Acquisition of *Triticum aestivum* (L.) Grown in Agricultural Alfisols. *Agriculture*, *5*(3), 668-681. 2015.
53. *Okrent, R., Halgren, A., Azevedo, M., Chang, J., Mills, D., Maselko, M., Armstrong, D., Banowetz, G., and **Trippe, K.M.**; Negative regulation of germination-arrest factor production in Pseudomonas fluorescens WH6 by a putative extracytoplasmic function sigma factor. *Microbiology*. 160 (Pt 11):2432-42. 2014.
54. Mueller-Warrant, G.W., Anderson, N.P., Sullivan, C.S., Whittaker, G.W., and **Trippe, K.M.** Can knowledge of spatial variability in slug populations help improve stand establishment? 2014 Oregon State University Seed Production Research Report, Department of Crop and Soil Sciences, (available online at https://cropandsoil.oregonstate.edu/sites/agscid7/files/crop-soil/mueller_warrant_spatial_slugs.pdf) 2014.
55. ***Trippe, K.M.,** Wolpert, T.J., Hyman, M.R., and Ciuffetti, L.M.; RNAi Silencing of a cytochrome P450 monoxygenase disrupts the ability of a filamentous fungus, *Graphium* sp., to grow on short-chain gaseous alkanes and ethers. *Biodegradation*. 25:1, 137-135. 2014.

56. ***Trippe, K.M.,** McPhail, K., Armstrong, D., Azevedo, M., and Banowetz, G.; *Pseudomonas fluorescens* SBW25 produces furanomycin, a selective antimicrobial agent. *BMC Microbiology*. 13:1,111-121. 2013.
57. ***Skinner, K.M**., Ciuffetti, L.M., and Hyman, M.R.; Metabolism and Cometabolism of Cyclic Ethers by a Filamentous Fungus, a *Graphium* sp. *Applied and Environmental Microbiology*. 75: 5514-5522. 2009.
58. Schoch, C.L. Sung, G., López-Giráldez, F., Townsend, J.P., Miadlikowska, J., Hofstetter, V., Robbertse, B., Matheny, P. B., Kauff, F., Wang, Z., Gueidan, C., Andrie, R.M., **Trippe**, **K.M.** et al. The Ascomycota Tree of Life, A Phylum-Wide Phylogeny Clarifies the Origin and Evolution of fundamental Reproductive and Ecological Traits. *Systematic Biology*. 58:2, 224-239. 2009.
59. ***Skinner, K.M.,** Martinez-Prado, A., Williamson, K.J., and Ciuffetti L.M.; Pathway, Inhibition and Regulation of MTBE Oxidation by a Filamentous Fungus, a *Graphium* sp. *Applied Microbiology and Biotechnology*. 77:6,1359-65. 2008.

PRESENTATIONS

I have presented over 100 presentations at local, regional, national, and international scientific, extension, academic, and government meetings and workshops. A full list is available upon request.

HONORS & AWARDS

American Society of Agronomy **2023**
Crop Science Society of America
Editor's Citation for Excellence,
Associate Editor, Agrosystems, GeoSciences & Environment

American Society of Agronomy **2021**
Extension Education Community
Excellence in Digital Decision Aids
Pacific Northwest Biochar Atlas

U.S. Department of Agriculture **2012- present (each year)**
Outstanding Performance Award
U**.S. Department of Agriculture Pacific West Area** **2021**
Outreach, Diversity, and Equal Opportunity Award
Federal Laboratory Consortium for Technology Transfer **2018**
Outstanding Partnership Award
U.S. Department of Agriculture PWA Area **2014, 2015**
Summer Internship Program
Science Program for Excellence in Science- Awardee **2006**
American Association Advancement of Science
Travel Grant Award ($500) **2004**
Fungal Genetics Conference, Genetics Society of America
Anita Summers Graduate Student Travel Award ($300) **2004**

Young Botanist Award	**2000**
Botanical Society of America	
Outstanding Senior Award	**2000**
Oregon State University, Botany and Plant Pathology	
Charles and Helen Fulton Scholarship	**1999**
Oregon State University, College of Science	
Phi Kappa Phi- Honor Society	**1999**
Phi Kappa Phi Junior Accolade Award	**1998**

FELLOWSHIPS & FUNDING

1. Western SARE, “Optimizing Soil Carbon Sequestration in Oregon Seed Production Systems” $342,415 (2023-2025 Co-PI).
2. Department of Energy Bioenergy Technology Office. “RESTORE: Replenishing EcoSystems by Transforming Residues to Energy” $2,000,000 (2023-2028).
3. USDA NRCS “Development of A nationwide Biochar Decision Support Tool” PI: Kristin Trippe $1,700,000 (2022-2027).
4. Oregon State University Agricultural Research Foundation, Oregon Seed Council. "Estimating Carbon Storage in Grass Seed Crops?" $25,000 (2021-2022; co-PI)
5. Oregon State University Agricultural Research Foundation “Quantifying the relationship between tile drainage, carbon storage, and water quality in grass seed cropping systems.” PI: Kristin Trippe $15,000 (2021-2022)
6. ARS Administrator-Funded Research Associate Award, Class of 2021 PI: Kristin Trippe. $140,000 (2021-2023).
7. Mint Industry Research Council. “Inhibiting the Infectivity of *Verticillium dahliae* in Mint with applications of Wood Vinegar”. PI: Kristin Trippe. $11,328 (2020)
8. USDA Specialty Crop Block Grant Program, Oregon Department of Agriculture and the Northwest Turfgrass Association. “Enhancing turfgrass carbon sequestration to improve sustainability and market access”. $195,358. (2020-2022)
9. Oregon State University Agricultural Research Foundation, Oregon Seed Council. "Estimating Carbon Storage in Grass Seed Crops?" $25,000 (2020)
10. UDSA-ARS Headquarters Funding Alternatives to Antibiotics Program: Identifying Novel Solutions that Inhibit Dispersal and Infectivity Of Soil-borne Pathogens (INSIDIOuS- Pathogens in Mint). PI: Kristin Trippe. $59,393. (2019)
11. USDA-NIFA: Prevention of Pesticide INfiltration and Translocation (P-PINOT). NIFA post-doctoral fellowship awarded to Manuel Garcia Jaramillo. Primary Mentor: K.M. Trippe $160,000. (2018-2020)
12. USDA Sun Grant: Juniper Biomass Optimization Project (JuBOP). PI: Kristin Trippe. $300,000. (2017-2019)
13. US Geological Service, Climate Science Center: Regional assessment of biochar soil amendments on crop productivity, drought resilience, and carbon sequestration. PI:K.M. Trippe $67,000 (2016-2017)
14. OSU College of Forestry Institute for Working Forest Landscapes: Opportunities for biochar production to reduce forest wildfire hazard, sequester carbon, and increase agricultural productivity of dryland soils. Co-PIs: J. Sessions, K.M. Trippe,

S. Machado, J. Campbell, J. Bailey, D. Leavell, and D. Smith. $249,000 (2015-2017)

15. U.S. EPA: Formosa Mine Project: Amending Metals contaminated Mine Soil with Biochar and Other Amendments to facilitate Soil Remediation. Co-PIs: J. Novak, J. Ippolito, K. Trippe, M. Johnson, K. Spokas. $500,000 (2016).
16. USDA Pacific Northwest Area Summer Intern Award 2014 and 2015($3,000 each)
17. Oregon State University Agricultural Research Foundation. Effects of *Pseudomonas fluorescens* WH6 on annual bluegrass emergence in established perennial ryegrass. (PI Alec Kowalewski, $5,000)
18. Oregon State University Agricultural Research Foundation, Oregon Seed Council. Can Knowledge of Spatial Variation in Slug Density Be Used to Reduce Control Costs and Improve Stand Establishment Success Rates? (PI George Mueller-Warrant, $15,000)
19. Environmental Protection Agency, Science to Achieve Results (STAR) Graduate Fellowship ($100,000/3 years) awarded to K.M. Skinner-Trippe 2004-2007.

ACADEMIC & PROFESSIONAL SERVICE

Journal Service

Senior Editor

Agrosystems, Geosciences, and Environment. 2024-present

Associate Editor

Agrosystems, Geosciences, and Environment. 2021-present
Soil Science Society of America. 2024-present

AD Hoc Reviewer (Journals and books)

Agrosystems, Geosciences, and Environment; Agriculture; Agronomy Journal; Annals of Applied Biology; Applied Soil Ecology; Bacteria; Biochar Journal; Biocontrol; Biocontrol Science and Technology; Canadian Journal of Soil Science; Chemosphere; Ecotoxicology; Environmental International; Field Crop Research; Geoderma; Heliyon; Journal of Biotechnology; Journal of Environmental Management; Journal of Hazardous Materials; Journal of Microbiological Methods; Journal of Soils and Sediments; Journal of Soil Science and Plant Nutrition; Journal of Video Experiments; Microbiology; Microbial Ecology; Microorganisms; Plant and Soil; Rangeland Ecology and Management; Scandinavian Journal of Forestry; Science of the Total Environment; Soil Science Society of America Journal; and Waste Management. 2017-present.

Other Review

Office of the Chief Economist Subject Matter Expert Review:
"Marginal Abatement Cost Estimates of Biochar", 2022
"The Environmental Impact of U.S. Food Waste Management Pathways", 2023
"Technical Report: Environmental and Economic Value of Compost", 2023

Grant Review (Panel Service)

BARD	2024
USDA Fertilizer Production Expansion Program	2023
Western SARE	2018
National Institute of Food and Agriculture	2017
USDA Global Environment Facility	2018
National Science Foundation	(2 years)

Service

USDA ARS FSCRU

Corvallis Outreach, Diversity, Education & Opportunity Comm.	2019-present
Research Agronomist- Evaluation Committee (Chair)	2020
Research Entomologist- Evaluation Committee	2020
Research Plant Pathologist- Evaluation Committee	2020
Safety Committee- Chair	*2018*
Engagement Committee-Chair	2017
Research Leader Search-Evaluation Committee	2015 and 2016
Seminar Coordinator	*2014*

Professional Society

Crop Science Society of America

Judge- Robert E. Barnes Graduate Student Award	2015
Moderate and organize sessions	2016-present
Judge- Biochar Community Graduate Student Award	2017-2018

Soil Science Society of America

Moderate and organize sessions	*2016-present*
Judge: Graduate student competition, Soil Biology And Biochemistry division	*2017-present*
Women in Science Committee	*2020-2023*
Chair Soil Biology Graduate Student Scholarship Committee	*2021*
Chair-Elect, Soil Biology Graduate Student Scholarship Committee	*2020*
Program Planning Committee	*2020*
Chair Elect, Soil Biology and Biochemistry Division	*2019*
Chair, Soil Biology and Biochemistry Division	*2020*
Chair, Nomination Committee for Fundamental Soil Science Group Representative to the Board	*2020*
Chair-Elect, Francis E. Clark Distinguished Lectureship Committee	*2020*
Chair, Nominations Committee for Soil Biology and Biochemistry Division Officers	*2020*
Member-Nominations Committee for SSSA President Elect	*2021*
Chair Francis E. Clark Distinguished Lectureship Committee	*2021*

Past-Chair; Soil Biology and Biochemistry Division	*2021*
Member, SSSA Fellow Committee	*2024-present*
US Biochar Initiative	
Board Member	*2018-present*
Member-Education Committee	*2020-present*
Chair-Peer-review committee	2020-present
USBI Member Planning Committee	*2016, 2024*
USBI Member Technical Committee	*2016,2019, 2022, 2024*
Dry Farming Institute	
Board Member	*2023-present*
Treasurer	*2024-present*
Botany and Plant Pathology, Oregon State University	
Graduate Studies Committee	*2005*
Departmental Chair Search Committee	*2003*
Curriculum Committee	*2002*
Graduate Student Association- Vice President	*2002*
Promotion and Tenure Committee	*2000*
University Service to Oregon State University	
Courtesy faculty- Oregon State University (Department of Crop and Soil Science)	2015-present
OSU Convocations and Lectures Committee Student Member and Co-Chair	*2001-2005*

EDUCATIONAL, COMMUNITY & TECHNICAL OUTREACH

Botany and Plant Pathology Museum Days, Volunteer Oregon State University	*2000-2005*
Museum/ Discovery Days Departmental, Coordinator Oregon State University	*2003*
Toxic Outreach and Services to Communities, Volunteer Oregon State University	*2003-2005*
Fascination of Plants Day, Volunteer USDA-ARS	*2012-2015*
NRCS-CIG awarded to Wilson Biochar Associates *Scientific Advisor* *OCEAN Connect*	*2015*
Biochar use in Remediation of Degraded Lands Philomath School District Grade 1,5	*2019*
Hidden Worlds Contributed to “The Biochar Effect” Movie (In production).	2019-present 2024
Contributed to Oregon Department of Forestry and	2024

Colorado State Forest Service to contribute to video piece on biomass utilization.

MENTORING

Post-Doctoral Fellows

Sadiya Tijjani (Current)
Lauren Breza (Current)
Martina Gonzalez Mateu-Oregon State University (Current: Swiss Federal Institute of Technology, Lausanne, Switzerland)
Manuel Garcia Jaramillo- USDA NIFA Fellow (Current: Asst. Prof. Oregon State University)
Rachel Okrent- USDA NIFA Fellow (Current: Senior Scientist 1, Novozymes, Inc.)
Claire Phillips - USDA ARS (Current: Research Soil Scientist, USDA ARS Pullman, WA)
Brett Mellbye - USDA ARS (Current: Fermentation Scientist; Plant Health, Inc.)

Graduate Students

Horia Domnariu (Fulbright Scholar, Romania)
Cezar Zamora (MS), Oregon State University
Karin Nguyen (MS), Oregon State University
*Danielle Stevenson, UC Riverside (FFAR Fellow mentee)
*Kelly Shannon (MS, PhD), Oregon State University
*Clint Mattox (MS and PhD), Oregon State University
*Bryan Sales (PhD), Oregon State University
*Austin Freeman (MS), Washington State University
*Andrea Retano (PhD), Oregon State University
*Regina Kelly (PhD), Oregon State University
(*Committee Service)

Undergraduate Students

Katie Hampton-Wonder	Lily Grant
Stephanie Chiu	Anthony Beovich
Bailey Murphy	Alexandre Pederson
Octavia Hogaboam	Kenzaburo Sugimoto
Prowshchal Mahato	Kelly Shannon
Jasmine Vasen	Michael Cruse
Ashley Pfarrer	Ari Anders
Payton Abele	Emily Southwell
Tyler Pfarrer	Alejandra Ramierez