

Sharon Weyers' Publications

(Updated 1/28/2021)

1833. Brockamp, R.L., **Weyers, S.L.** 2021. Biochar amendments show potential for restoration of degraded, contaminated, and infertile soils in agricultural and forested landscapes. In: Stanturf, J; Callaham, M., editors. *Soils and Landscape Restoration*. Cambridge, MA: Academic Press. p. 209-236. <https://doi.org/10.1016/B978-0-12-813193-0.00008-4>.
1834. Ritz, K.E., Heins, B.J., Moon, R.D., Sheaffer, C.C., **Weyers, S.L.** 2021. Milk production, body weight, body condition score, activity, and rumination of organic dairy cattle grazing two different pasture systems incorporating cool- and warm season-forages. *Animals*. 11:264. <https://doi.org/10.3390/ani11020264>.
1835. Ritz, K.E., Heins, B.J., Moon, R., Sheaffer, C., **Weyers, S.L.** 2020. Forage yield and nutritive value of cool-season and warm-season forages for grazing organic dairy cattle. *Agronomy*. 10:1963. <https://doi.org/10.3390/agronomy10121963>.
1829. **Weyers, S.L.**, Archer, D.W., **Johnson, J.M.**, **Wilts, A.R.** 2020. Management drives differences in nutrient dynamics in conventional and organic four-year crop rotation systems. *Agronomy*. 10:764. <https://doi.org/10.3390/agronomy10060764>.
1819. Moore, K., Anex, R., Elobeid, A.E., Fei, S., Flora, C.B., Goggi, S., Jacobs, K., Jha, P., Kaleita, A.L., Karlen, D.L., Laird, D.A., Lenssen, A.W., Lubberstedt, T., Mcdaniel, M.D., Raman, D.R., **Weyers, S.L.** 2019. Regenerating agricultural landscapes with perennial groundcover for intensive crop production. *Agronomy*. 9(8):458. <https://doi.org/10.3390/agronomy9080458>.
1818. **Weyers, S.L.**, Thom, M.D., **Forcella, F.**, Eberle, C.A., Matthees, H.L., **Gesch, R.W.**, Ott, M., Feyereisen, G.W., Strock, J.S., Wyse, D. 2019. Potential for nutrient loss reduction in cover cropped systems in the Upper Midwest. *Journal of Environmental Quality*. 48(3):660-669. <https://doi.org/10.2134/jeq2018.09.0350>.
1800. **Weyers, S.L.**, Johnson, J.M., Archer, D.W., Forcella, F., Gesch, R.W. 2018. Manure and residue inputs maintained soil organic carbon in Upper Midwest conservation production systems. *Soil Science Society of America Journal*. 82:878-888. <https://doi.org/10.2136/sssaj2017.09.0344>.
1759. Delgado, J.A., **Weyers, S.L.**, Dell, C.J., Harmel, D., Vandenberg, B., Wilson, G., Carter, J., Barbour, N., Kleinman, P.J.A., Sistani, K.R., Leytem, A.B., Huggins, D., Strickland, T., Kitchen, N.R., Meisinger, J.J., Del Grosso, S.J., **Johnson, J.M-F.**, Balkcom, K., Finley, J., Fukagawa, N., Powell, J.M., VanPelt, R.S. 2017. Nutrient uptake and outcome network (NUOnet): Connecting a wide range of natural resources conservation networks [abstract]. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meeting. Oct. 22-25, 2017, Tampa, FL. Available: <https://scisoc.confex.com/crops/2017am/webprogram/Paper107431.html>.
1742. Thom, M.D., Eberle, C.A., Forcella, F., Gesch, R., **Weyers, S.** 2017. Specialty oilseed crops provide an attractive source of pollen for beneficial insects. *Journal of Applied Entomology*. 1-12.
1746. **Weyers, S.L.**, Archer, D.W., **Forcella, F.**, **Gesch, R.W.**, **Johnson, J.M.** 2017. Can reducing tillage and increasing crop diversity benefit grain and forage production? *Renewable Agriculture and Food Systems*. doi: 10.1017/S1742170517000187.
1745. **Weyers, S.L.**, Archer, D.W., **Forcella, F.**, **Gesch, R.W.**, **Johnson, J.M.** 2017. Strip-tillage reduces productivity in organically managed grain and forage cropping systems in the Upper Midwest, USA. *Renewable Agriculture and Food Systems*. doi: 10.1017/S1742170517000084.
1756. **Weyers, S.L.**, Archer, D.W., **Johnson, J.M.**, **Gesch, R.W.**, **Forcella, F.** 2017. Long-term productivity in traditional, organic and low-input management systems of the Upper Midwest [abstract]. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meeting. Oct. 22-25, 2017, Tampa, FL. Available: <https://scisoc.confex.com/crops/2017am/webprogram/Paper105947.html>.
1739. **Weyers, S.L.**, Gramig, G. 2017. Low input and intensified crop production systems effects on soil health and environment. In: Al-Kaisi, M., Lowery, B., editors. *Soil Health and Intensification of Agroecosystems*. London, UK: Academic Press. p. 277-304.
1724. Thom, M.D., Eberle, C.A., Forcella, F., Gesch, R.W., **Weyers, S.L.**, Lundgren, J.G. 2016. Nectar production in oilseeds: Food for pollinators in an agricultural landscape. *Crop Sci*. 56:727-739.
1726. Gesch, R.W., Forcella, F., Papiernik, S.K., Eberle, C., Riedell, W.E., Lundgren, J.G., Nemecek, K.T., **Weyers, S.L.**, Johnson, J.M., Thom, M.D. 2015. Industrial oilseeds bolster "hub" crop yields when used in rotation [abstract]. Association for the Advancement of Industrial Crops. p. 19.
1682. **Eberle, C.A.**, **Forcella, F.**, **Gesch, R.**, **Weyers, S.**, **Peterson, D.**, and **Eklund, J.** 2014. Flowering dynamics and pollinator visitation of oilseed echium (*Echium plantagineum*). *PLoS ONE* 9(11): e113556. doi:10.1371/journal.pone.0113556. <http://handle.nal.usda.gov/10113/59994>
1679. **Weyers, S.L.** and Spokas, K.A. 2014. Crop residue decomposition in Minnesota biochar-amended plots. *Solid Earth*. 5:499-507.
1675. Kuchenreuther, M.A., Ranelli, L.B., Toll, A.E., **Weyers, S.L.** 2013. Development of sustainable, native grass-based bioenergy production systems in the prairie region of Minnesota: Biomass production and plant community response to fertilizer and harvest treatments [abstract]. Ecological Society of America. Available: <http://eco.confex.com/eco/2013/webprogram/Paper43510.html>.
1647. **Weyers, S.L.**, Johnson, J.M-F, and Archer, D.W. 2013. Assessment of multiple management systems in the Upper Midwest. *Agronomy Journal* 105(6):1665-1675. <http://handle.nal.usda.gov/10113/57877>
1677. **Weyers, S.L.**, Kuchenreuther, M.A., Wilts, A.R. 2013. Development of sustainable, native grass-based bioenergy production systems in the prairie region of Minnesota: Soil nutrient response to fertilizer and harvest treatments [abstract]. Ecological Society of America. Available: <http://eco.confex.com/eco/2013/webprogram/Paper43898.html>.

1610. Johnson, M-F., **Weyers, S.**, Archer, D.W., Barbour, N.W. 2012. Nitrous oxide, methane emission, and yield-scaled emission from organically and conventionally managed systems. *Soil Sci. Soc. Am. J.* 76:1347-1357. [View](#)
1580. Jaradat, A.A., and **S.L. Weyers**. 2011. Statistical modeling of yield and variance instability in conventional and organic cropping systems. *Agron. J.* 103(3):673-684. ([944 K](#))
1581. Johnson, J.M.F., D.W. Archer, D.L. Karlen, **S.L. Weyers**, and W.W. Wilhelm. 2011. Soil management implications of producing biofuel feedstock. p. 371-390. *In: J. Hatfield and T. Sauer (eds.) Soil management: Building a stable base for agriculture. American Society of Agronomy Series. American Society of Agronomy and Soil Science Society of America, Madison, WI.*
1588. Johnson, J. M-F., D.W. Archer, **S.L. Weyers**, and N.W. Barbour. 2011. Do mitigation strategies reduce global warming potential in the northern U.S. Corn Belt? *J. Environ. Quality* 40:1551-1559.
1601. Johnson, J.M., **S.L. Weyers**, D.W. Archer, and N.W. Barbour. 2011. Greenhouse gas emission from two cropping systems in the northern Corn Belt [abstract] [CD-ROM]. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meeting. Oct. 16-19, 2011, San Antonio, TX. [View](#)
1600. **Weyers, S.L.** and C.A. Cambardella. 2011. Soil quality changes with organic no-till production [abstract] [CD-ROM]. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meeting. Oct. 16-19, 2011, San Antonio, TX. [View](#)
1587. **Weyers, S.L.**, and Spokas, K.A. 2011. Impact of biochar on earthworm populations: A review. *Applied and Environmental Soil Science*. [DOI: 10.1155/2011/541592](#).
1520. Johnson, J.M., S.K. Papiernik, M.M. Mikha, K.A. Spokas, M.D. Tomer, **S.L. Weyers**. 2010. Soil Processes and Residue Harvest Management. *In: Lal, R., Stewart, B.A., (eds.) Soil Quality and Biofuel Production. Advances in Soil Science. Boca Raton, FL: CRC Press.* p. 1-44. ([3006 K](#))
1537. Liesch, A.M., **S.L. Weyers**, J.C. Gaskin, and K.C. Das. 2010. Impact of two different biochars on earthworm growth and survival. *Annals Environ. Sci.* 4:1-9.
1538. Liesch, M., **S.L. Weyers**, J. Gaskin and K.C. Das. 2010. The effects of two different biochars on earthworm survival and microbial carbon levels. *In: Gilkes, R.J., Prakongkep, N., editors. Proceedings of the 19th World Congress of Soil Science: Soil Solutions for a Changing World, August 1-6, 2010, Brisbane, Australia.* p. 67-70.
1560. **Weyers, S.L.**, Gaskin, J., Liesch, A.M., Das, K.C. 2010. Earthworms, microbes and the release of C and N in biochar amended soil [abstract]. *In: Proceedings of the 2010 U.S. Biochar Initiative Conference, June 27-30, 2010, Ames, Iowa.* Available in [PDF](#).
1528. Jaradat, A.A., J. M-F Johnson, **S.L. Weyers** and N.W. Barbour. 2009. Determinants and prediction of carbon/nitrogen ratio in five diverse crop plants. *Commun. Soil Sci. Plant Anal.* 40:2688-2711. ([397 K](#))
1529. **Weyers, S.**, A.M. Liesch, J. Gaskin and K. Das. 2009. Earthworms contribute to increased turnover in biochar amended soils [abstract][CD-ROM]. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meeting. Nov. 1-5, 2009, Pittsburgh, PA.
1477. Archer, D. and **S. Weyers**. 2008. Energy and carbon budgets in transitional cropping systems in Minnesota. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meetings. Oct. 5-9, 2008, Houston, TX.
1490. Johnson, J.M., **S.L. Weyers** and D.C. Reicosky. 2008. Sustainable biomass removal rates [abstract] [CD-ROM]. Midwest Area Bioenergy Research Forum Meeting Abstracts. Midwest Area Bioenergy Research Forum. July 18, 2008, Peoria, IL.
1472. **Lachniet Weyers, S.**, D. Archer, J. Johnson and A. Jaradat. 2008. Microbial biomass and nutrient dynamics in transitional systems in Minnesota. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meeting. Oct. 5-9, 2008, Houston, TX.
1466. **Lachniet Weyers, S.**, D.C. Reicosky, T. Ochsner and J.M. Baker. 2008. N mineralization and microbial dynamics in manured and non-manured fields. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meetings. Oct. 5-9, 2008, Houston, TX.
1454. **Weyers, S.L.**, H.H. Schomberg, P.F. Hendrix, K.A. Spokas and D.M. Endale. 2008. Construction of an electrical device for sampling earthworm populations in the field. *Applied Engineering Agric.* 24(3):391-397. ([2853 K](#))
1426. Archer, D.W. A.A. Jaradat, J.M-F. Johnson, **S. Lachniet Weyers**, R.W. Gesch, F. Forcella, and H.K. Kludze. 2007. Crop Productivity and Economics during the Transition to Alternative Cropping Systems. *Agronomy Journal* 99:1538-1547. ([134 K](#))
1404. Forcella, F. and **S. Lachniet Weyers**. 2007. Mid-continent fall temperatures at the 10-cm soil depth. *Agronomy Journal* 99:862-866. ([137 K](#))
1435. Jaradat, A., J. Johnson, **S. Weyers** and N. Barbour. 2007. Dynamics of crop residue composition-decomposition: Temporal modeling of multivariate carbon sources and processes. American Society of Agronomy Abstract. [CD-ROM computer file] ASA, Madison, WI.
1374. Johnson, J.M., Barbour, N.W., and **Lachniet Weyers, S.L.** 2007. Chemical composition of crop biomass impacts its decomposition. *Soil Sci. Soc. of Am. J.* 71(1):155-162. ([551 K](#))
1427. Johnson, J.M., A.J. Franzluebbers, **S.L. Lachniet Weyers**, D.C. Reicosky. 2007. Agricultural opportunities to mitigate greenhouse gas emissions. *Environmental Pollution*. 150:107-124. ([615 K](#))
1424. Sainju, U., H.H. Schomberg, B.P. Singh, W.F. Whitehead, P.G. Tillman, and **S.L. Lachniet Weyers**. 2007. Cover crop effect on soil carbon fractions under conservation tillage cotton. *Soil Tillage Res.* 96 (2):205-218. ([343 K](#))
1351. Callaham, Jr., M.A., G. González, C.M. Hale, L. Heneghan, **S.L. Lachniet**, X. Zou. 2006. Policy and management response to earthworm invasions in North America. *Biol Invasions* 8:1317-1329. ([484 K](#))
1350. Hendrix, P.F., G.H. Baker, M.A. Callaham, Jr., G.A. Damoff, C. Fragoso, G. González, S.W. James, **S. L. Lachniet**, T. Winsome and X. Zou. 2006. Invasion of exotic earthworms into ecosystems inhabited by native earthworms. *Biol Invasions* 8:1287-1300. ([209 K](#))

1358. **Lachniet Weyers, S.L.**, Johnson, J.M., Olness, A.E., Clapp, C.E., Wilts, A.R., Rinke, J.L., Barbour, N.W. 2006. Tracking N use efficiency with ¹⁵N labeling of corn [abstract] [CD-ROM]. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meeting. November 12-16, 2006, Indianapolis, IN. [PDF: 36 K.](#)
1362. Sainju, U., H. Schomberg, B. Singh, W. Whitehead, P. G. Tillman, and **S. Lachniet Weyers**. 2006. Cover Crops and Sampling Dates Effect on Soil Carbon Pools under Conservation Tillage Cotton. [abstract] [CD-ROM]. ASA-CSSA-SSSA Annual Meeting Abstracts. ASA-CSSA-SSSA Annual Meeting. November 12-16, 2006, Indianapolis, IN. [PDF: 38 K.](#)
1302. **Lachniet Weyers, S.**, D. Archer, J. Johnson, A. Wilts, N. Barbour and J. Eklund. 2005. Microbial dynamics in conventional and organic managed systems. American Society of Agronomy Abstract. [CD-ROM computer file] ASA, Madison, WI. [PDF: 141 K.](#)
1241. **Lachniet, S.L.**, D.W. Archer, J. Johnson, A. Wilts, N. Barbour and J. Eklund. 2005. Use of FAME to distinguish management effects in conventional and organic farming systems. Soil Ecology Society Abstract. SES, Argonne, IL. p. 63. [\(PDF: 43K\)](#)
1303. Schomberg, H., P.G. Tillman, **S.L. Lachniet Weyers**, P. Timper, D. Olson, U. Sainju, S. Phatak, W. Whitehead and B. Singh. 2005. Multidisciplinary approach to enhancing sustainability in cotton production in the Southeastern USA. American Society of Agronomy Abstract. [CD-ROM computer file] ASA, Madison, WI. [PDF: 143 K.](#)
1367. Schomberg, H.H., Tillman, G., Timper, P., **Lachniet Weyers, S.L.**, Olson, D.M., Sainju, U.M., Phatak, S., Lamb, M.C., Whitehead, W., Utley, S. 2005. Enhancing sustainability in cotton production through reduced chemical inputs, cover crops, and conservation tillage. Final Project Report LS01-121 to the Sustainable Agriculture Research and Education (SARE) program. [PDF: 82 K.](#)
1247. Johnson, J.M.F., D. Archer, **S. Lachniet**, N.W. Barbour, J. Eklund and A. Wilts. 2004. Comparison of soil biological indicators during three year transition from conventional to alternative and organic cropping systems. American Society of Agronomy Abstract. [CD-ROM computer file] ASA, Madison, WI.
1198. **Lachniet, S.L.**, P.F. Hendrix, R.L. Potter, D.C. Coleman, D.A. Crossley, Jr. 2004. Winter decomposition of transgenic cottons residue in conventional-till and no-till systems. Applied Soil Ecol. 27:135-142. [\(PDF: 288 K\)](#)
1251. **Lachniet, S.L.**, H.H. Schomberg and P.G. Tillman. 2004. Soil microarthropod community change under conservation management practices. American Society of Agronomy Abstract. [CD-ROM computer file] ASA, Madison, WI.
1250. Schomberg, H., D. Endale, A. Calegari, M. Cabrera, R. Peixoto, M. Miyazawa, **S. Lachniet** and R. Sharpe. 2004. Cover crop influences on N mineralization in a Piedmont soil. American Society of Agronomy Abstract. [CD-ROM computer file] ASA, Madison, WI.
1252. **Lachniet, S.L.**, P.F. Hendrix and X. Zou. 2002. Interactive effects of native and exotic earthworms on resource use and nutrient mineralization in a tropical wet forest soil of Puerto Rico. Biol Fertil. Soils 36:43-52. [PDF: 214 K.](#)
1253. **Lachniet, S.L.** and P.F. Hendrix. 2001. Interaction of the earthworm *Diplocardia mississippiensis* (Megascolecidae) with microbial and nutrient dynamics in a subtropical Spodosol. Soil Biol. Biochem. 33:1411-1417. [PDF: 121 K.](#)
1308. **Lachniet, S.L.**, R.W. Parmelee, D. McCartney and M. Allen. 1997. Characteristics of macroporosity in a reduced tillage agroecosystem with manipulated earthworm populations: Implications for infiltration and nutrient transport. Soil Biol. Biochem. 29(3/4):493-498. [PDF: 576K.](#)