Steve W Culman

List of Publications by Year
in descending order

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77 papers	4,484 citations	136740 32 h-index	110170 64 g-index
80 all docs	80 docs citations	80 times ranked	4060 citing authors

#	Article	IF	Citations
1	Permanganate Oxidizable Carbon Reflects a Processed Soil Fraction that is Sensitive to Management. Soil Science Society of America Journal, 2012, 76, 494-504.	1.2	436
2	Increased Food and Ecosystem Security via Perennial Grains. Science, 2010, 328, 1638-1639.	6.0	397
3	T-REX: software for the processing and analysis of T-RFLP data. BMC Bioinformatics, 2009, 10, 171.	1.2	362
4	Long-Term Evidence Shows that Crop-Rotation Diversification Increases Agricultural Resilience to Adverse Growing Conditions in North America. One Earth, 2020, 2, 284-293.	3.6	219
5	Soil and Water Quality Rapidly Responds to the Perennial Grain Kernza Wheatgrass. Agronomy Journal, 2013, 105, 735-744.	0.9	192
6	Comparison of Permanganateâ€Oxidizable Carbon and Mineralizable Carbon for Assessment of Organic Matter Stabilization and Mineralization. Soil Science Society of America Journal, 2016, 80, 1352-1364.	1.2	181
7	Long-term impacts of high-input annual cropping and unfertilized perennial grass production on soil properties and belowground food webs in Kansas, USA. Agriculture, Ecosystems and Environment, 2010, 137, 13-24.	2.5	161
8	Harvested perennial grasslands provide ecological benchmarks for agricultural sustainability. Agriculture, Ecosystems and Environment, 2010, 137, 3-12.	2.5	154
9	Shortâ€and Longâ€Term Labile Soil Carbon and Nitrogen Dynamics Reflect Management and Predict Corn Agronomic Performance. Agronomy Journal, 2013, 105, 493-502.	0.9	151
10	Analysis of T-RFLP data using analysis of variance and ordination methods: A comparative study. Journal of Microbiological Methods, 2008, 75, 55-63.	0.7	136
11	Managing for Multifunctionality in Perennial Grain Crops. BioScience, 2018, 68, 294-304.	2.2	113
12	No-tillage conversion of harvested perennial grassland to annual cropland reduces root biomass, decreases active carbon stocks, and impacts soil biota. Agriculture, Ecosystems and Environment, 2010, 137, 25-32.	2.5	112
13	Going where no grains have gone before: From early to mid-succession. Agriculture, Ecosystems and Environment, 2016, 223, 223-238.	2.5	108
14	Biodiversity is associated with indicators of soil ecosystem functions over a landscape gradient of agricultural intensification. Landscape Ecology, 2010, 25, 1333-1348.	1.9	104
15	A Pipeline Strategy for Grain Crop Domestication. Crop Science, 2016, 56, 917-930.	0.8	101
16	Soil respiration and litter decomposition responses to nitrogen fertilization rate in no-till corn systems. Agriculture, Ecosystems and Environment, 2013, 179, 35-40.	2.5	84
17	Root traits and soil properties in harvested perennial grassland, annual wheat, and never-tilled annual wheat. Plant and Soil, 2014, 381, 405-420.	1.8	79
18	Tuning support vector machines regression models improves prediction accuracy of soil properties in MIR spectroscopy. Geoderma, 2020, 365, 114227.	2.3	70

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19	Microbial community response to soil solarization in Nepal's riceâ€“wheat cropping system. Soil Biology and Biochemistry, 2006, 38, 3359-3371.	4.2	66
20	Soil Protein as a Rapid Soil Health Indicator of Potentially Available Organic Nitrogen. Agricultural and Environmental Letters, 2018, 3, 180006.	0.8	65
21	An evaluation of carbon indicators of soil health in long-term agricultural experiments. Soil Biology and Biochemistry, 2022, 172, 108708.	4.2	63
22	Persistent soil carbon enhanced in Mollisols by well-managed grasslands but not annual grain or dairy forage cropping systems. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	60
23	Microbial community structure and abundance in the rhizosphere and bulk soil of a tomato cropping system that includes cover crops. Applied Soil Ecology, 2014, 77, 42-50.	2.1	57
24	Perennial grain crop roots and nitrogen management shape soil food webs and soil carbon dynamics. Soil Biology and Biochemistry, 2019, 137, 107573.	4.2	56
25	Abundance, diversity and connectance of soil food web channels along environmental gradients in an agricultural landscape. Soil Biology and Biochemistry, 2011, 43, 2374-2383.	4.2	55
26	Choice of organic amendments in tomato transplants has lasting effects on bacterial rhizosphere communities and crop performance in the field. Applied Soil Ecology, 2011, 48, 94-101.	2.1	49
27	Sources of Variability that Compromise Mineralizable Carbon as a Soil Health Indicator. Soil Science Society of America Journal, 2018, 82, 243-252.	1.2	49
28	Harvesting forage of the perennial grain crop kernza (Thinopyrum intermedium) increases root biomass and soil nitrogen cycling. Plant and Soil, 2019, 437, 241-254.	1.8	48
29	Plant-soil biodiversity relationships and nutrient retention in agricultural riparian zones of the Sacramento Valley, California. Agroforestry Systems, 2010, 80, 41-60.	0.9	40
30	Improved soil biological health increases corn grain yield in N fertilized systems across the Corn Belt. Scientific Reports, 2020, 10, 3917.	1.6	38
31	Repeatability and Spatiotemporal Variability of Emerging Soil Health Indicators Relative to Routine Soil Nutrient Tests. Soil Science Society of America Journal, 2018, 82, 939-948.	1.2	36
32	Assessing the sensitivity and repeatability of permanganate oxidizable carbon as a soil health metric: An interlab comparison across soils. Geoderma, 2020, 366, 114235.	2.3	36
33	How Does Nitrogen and Perenniality Influence Belowground Biomass and Nitrogen Use Efficiency in Small Grain Cereals?. Crop Science, 2018, 58, 2110-2120.	0.8	33
34	Overâ€Fertilization Does Not Build Soil Test Phosphorus and Potassium in Ohio. Agronomy Journal, 2018, 110, 56-65.	0.9	32
35	Effects of defoliation and row spacing on intermediate wheatgrass I: Grain production. Agronomy Journal, 2020, 112, 1748-1763.	0.9	31
36	Perennial grain on a Midwest Alfisol shows no sign of early soil carbon gain. Renewable Agriculture and Food Systems, 2018, 33, 360-372.	0.8	30

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37	Effects of defoliation and row spacing on intermediate wheatgrass II: Forage yield and economics. Agronomy Journal, 2020, 112, 1862-1880.	0.9	29
38	Quantification of Soil Permanganate Oxidizable C (POXC) Using Infrared Spectroscopy. Soil Science Society of America Journal, 2017, 81, 277-288.	1.2	28
39	Does crop rotation affect soil organic matter stratification in tillage systems?. Soil and Tillage Research, 2021, 209, 104932.	2.6	22
40	Nematode community responses to a moisture gradient and grazing along a restored riparian corridor. European Journal of Soil Biology, 2012, 50, 32-38.	1.4	20
41	Effect of Planting Date and Starter Fertilizer on Soybean Grain Yield. Crop, Forage and Turfgrass Management, 2015, 1, 1-6.	0.2	20
42	Rigorous, empirical, and quantitative: a proposed pipeline for soil health assessments. Soil Biology and Biochemistry, 2022, 170, 108710.	4.2	20
43	Long-term application of low C:N residues enhances maize yield and soil nutrient pools across Kenya. Nutrient Cycling in Agroecosystems, 2019, 114, 261-276.	1.1	18
44	Grinding and spectra replication often improves midâ€ĐRIFTS predictions of soil properties. Soil Science Society of America Journal, 2020, 84, 914-929.	1.2	17
45	Linking soil microbial community structure to potential carbon mineralization: A continental scale assessment of reduced tillage. Soil Biology and Biochemistry, 2022, 168, 108618.	4.2	17
46	Effects of Gypsum Application Rate and Frequency on Corn Response to Nitrogen. Agronomy Journal, 2019, 111, 1109-1117.	0.9	14
47	Microbial feedbacks on soil organic matter dynamics underlying the legacy effect of diversified cropping systems. Soil Biology and Biochemistry, 2022, 167, 108584.	4.2	14
48	Multi-Criteria Assessment of the Economic and Environmental Sustainability Characteristics of Intermediate Wheatgrass Grown as a Dual-Purpose Grain and Forage Crop. Sustainability, 2022, 14, 3548.	1.6	14
49	Management Options for Contaminated Urban Soils to Reduce Public Exposure and Maintain Soil Health. Journal of Environmental Quality, 2017, 46, 420-430.	1.0	13
50	Knowledge gaps in organic research: understanding interactions of cover crops and tillage for weed control and soil health. Organic Agriculture, 2021, 11, 13-25.	1.2	13
51	Minimum dataset and metadata guidelines for soilâ€test correlation and calibration research. Soil Science Society of America Journal, 2022, 86, 19-33.	1.2	13
52	Optimizing acquisition parameters in diffuse reflectance infrared Fourier transform spectroscopy of soils. Soil Science Society of America Journal, 2020, 84, 930-948.	1.2	12
53	Which management practices influence soil health in Midwest organic corn systems?. Agronomy Journal, 2021, 113, 4201-4219.	0.9	12
54	Calibration of Mehlich-3 with Bray P1 and Ammonium Acetate in the Tri-State Region of Ohio, Indiana and Michigan. Communications in Soil Science and Plant Analysis, 2020, 51, 86-97.	0.6	10

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55	Vacant lot soil degradation and mowing frequency shape communities of belowground invertebrates and urban spontaneous vegetation. Urban Ecosystems, 2021, 24, 737-752.	1.1	10
56	Historical Perspective of Soil Balancing Theory and Identifying Knowledge Gaps: A Review. Crop, Forage and Turfgrass Management, 2017, 3, 1-7.	0.2	9
57	Absolute values and precision of emerging soil health indicators as affected by soil sieve size. Communications in Soil Science and Plant Analysis, 2018, 49, 1934-1942.	0.6	9
58	Do soil test levels and fertilization with phosphorus and potassium impact field crop tissue concentrations?. Agronomy Journal, 2020, 112, 3024-3036.	0.9	9
59	Base cation saturation ratios, soil health, and yield in organic field crops. Agronomy Journal, 2021, 113, 4190-4200.	0.9	9
60	Soil test phosphorus and phosphorus balance trends: A countyâ€level analysis in Ohio. Agronomy Journal, 2020, 112, 1617-1624.	0.9	8
61	How Does Phosphorus Restriction Impact Soil Health Parameters in Midwestern Cornâ€“Soybean Systems?. Agronomy Journal, 2019, 111, 1682-1692.	0.9	7
62	From the Ground Up: Prairies on Reclaimed Mine Landâ€”Impacts on Soil and Vegetation. Land, 2020, 9, 455.	1.2	7
63	Soil balancing within organic farming: negotiating meanings and boundaries in an alternative agricultural community of practice. Agriculture and Human Values, 2021, 38, 449-465.	1.7	7
64	Low Soil Phosphorus and Potassium Limit Soybean Grain Yield in Ohio. Crop, Forage and Turfgrass Management, 2017, 3, cftm2016.12.0081.	0.2	6
65	Base cation saturation ratios vs. sufficiency level of nutrients: A false dichotomy in practice. Agronomy Journal, 2021, 113, 5623-5634.	0.9	6
66	Historical perspective of soil balancing theory and identifying knowledge gaps: A review. Crops & Soils, 2018, 51, 40-47.	0.1	4
67	The Effect of Incubation Temperature on the Species Composition of Phytophthora, Phytopythium, and Pythium Communities Associated with Soybean. Phytobiomes Journal, 2021, 5, 133-144.	1.4	4
68	Organic Corn Production Practices and Profitability in the Eastern U.S. Corn Belt. Sustainability, 2021, 13, 8682.	1.6	4
69	Implications of choosing different interpolation methods: A case study for soil test phosphorus. Crop, Forage and Turfgrass Management, 2021, 7, e20126.	0.2	4
70	The prevalence and practice of soil balancing among organic corn farmers. Renewable Agriculture and Food Systems, 2021, 36, 365-374.	0.8	4
71	Water Quality and Nutrient Management Extension Programs in Ohio. Journal of Contemporary Water Research and Education, 2015, 156, 48-55.	0.7	3
72	Grain Yield Response of Corn (Zea mays L.) to Nitrogen Management Practices and Flooding. Plants, 2020, 9, 348.	1.6	3

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73	Quality or Quantity? Determining the Impact of Fine Root Traits on Soil Health in Row Crop Agriculture. Journal of Soil Science and Plant Nutrition, 0, , 1.	1.7	3
74	Biological and Biochemical Tests for Assessing Soil Fertility. Assa, Cssa and Sssa, 2017, , 134-147.	0.6	2
75	Farmer-Focused Tools to Improve Soil Health Monitoring on Smallholder Farms in the Morogoro Region of Tanzania. Plant Health Progress, 2018, 19, 56-63.	0.8	2
76	Shortâ€term responses of soils and crops to gypsum application on organic farms. Agronomy Journal, 2021, 113, 4220-4230.	0.9	2
77	Reply to Chen etÂal.: Soil organic carbon stocks and persistence of surface 30 cm of Mollisols. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	0