

[researcher ID](#)
[orcid](#)

Peer-reviewed journal articles

2025

1. Leifeld, J., Walz, I., 2025. Pyroligneous acid effects on crop yield and soil organic matter in agriculture—a review. *Agronomy* 15: 927.
2. Wüst-Galley, C., Leifeld, J., 2025 The distribution and (future) use of Switzerland’s organic soils. *Mires and Peat* 32, article 24.
3. Keel, S.G., Budai, A., Elsgaard, L., Hardy, B., Levvasseur, F., Zhi, L., Mondini, C., Plaza, C., Leifeld, J., 2025. Efficiency of plant biomass processing pathways for long-term soil carbon storage. *European Journal of Soil Science* 76: e70074.
4. Leifeld, J., Paul, S.M., Gross-Schmolders, M., Wang, Y., Wüst-Galley, C., 2025. Crediting peatland re-wetting for carbon farming: some considerations amidst optimism. *Mitigation and Adaptation Strategies for Global Change* 30: 13.

2024

5. Rainford, S.-K., Leifeld, J., Siegl, S., Hagenbucher, S., Riedel, J., Gross, T., Niggli, U., Keel, S.G., 2024. No relationship between outputs of simple humus balance calculators (VDLUFA and STAND) and soil organic carbon trends. *European Journal of Soil Science* 75: e70007.
6. Paul, S.M., Ammann, C., Wang, Y., Alewell, C., Leifeld, J., 2024. Can mineral soil coverage be a suitable option to mitigate greenhouse gas emissions from agriculturally managed peatlands? *Agriculture, Ecosystems & Environment* 375: 109197.
7. Sriskandarajah, N., Wüst-Galley, C., Heller, S., Leifeld, J., Määttä, T., Ouyang, Z., Runkle, B.R.K., Schiedung, M., Schmidt, M.W.I., Tumber-Dávila, S.J., Malhotra, A., 2024. Belowground plant allocation regulates rice methane emissions from degraded peat soils. *Scientific Reports* 14: 14593.
8. Liang, Z., Hermansen, C., Weber, P.L., Pesch, C., Greve, M.H., de Jonge, L.W., Mäenpää, M., Leifeld, J., Elsgaard, L., 2024. Underestimation of carbon dioxide emissions from organic-rich agricultural soils. *Communications Earth & Environment* 5: 286.
9. Rathnayake, D., Schmidt, H.-P., Leifeld, J., Bürge, D., Bucheli, T.D., Hagemann, N., 2024. Quantifying soil organic carbon after biochar application: How to avoid (the risk of) of counting CDR twice? *Frontiers in Climate* 6, doi: 10.3389/fclim.2024.1343516.
10. Wang, Y., Calanca, P., Leifeld, J., 2024. Sources of nitrous oxide emissions from agriculturally managed peatlands. *Global Change Biology* 30: e17144.
11. Don, A., Seidel, F., Leifeld, J., Kätterer, T., Martin, M., Pellerin, S., Emde, D., Seitz, D., Chenu, C., 2024. Reply letter to Munoz et al. ‘on the importance of time in carbon sequestration in soils and climate change mitigation’—Keep carbon sequestration terminologies consistent and functional’. *Global Change Biology* 30: e17230.
12. Don, A., Seidel, F., Leifeld, J., Kätterer, T., Martin, M., Pellerin, S., Emde, D., Seitz, D., Chenu, C., 2024. Carbon sequestration in soils and climate change mitigation – definitions and pitfalls. *Global Change Biology* 30:e16983.

2023

13. Fouché, J., Burgeon, V., Meersmans, J., Leifeld, J., Cornelis, J.-T., 2023. Accumulation of century-old biochar contributes to carbon storage and stabilization in the subsoil. *Geoderma* 440: 116717.
14. Keel, S.G., Bretscher, D., Leifeld, J., von Ow, A., Wüst-Galley, C., 2023. Soil carbon sequestration potential bounded by population growth, land availability, food production, and climate change. *Carbon Management* 14: 2244456.

15. Rodrigues, L., Budai, A., Elsgaard, L., Hardy, B., Keel, S.G., Mondini, C., Plaza, C., Leifeld, J., 2023. The importance of biochar quality and pyrolysis yield for soil carbon sequestration in practice. *European Journal of Soil Science* 74: e13396.
16. Wüst-Galley, C., Heller, S., Ammann, C., Paul, S., Doetterl, S., Leifeld, J., 2023. Methane and nitrous oxide emissions from rice grown on organic soils in the temperate zone. *Agriculture, Ecosystems and Environment* 356: 108641.
17. Mayer, M., Leifeld, J., Szidat, S., Mäder, P., Krause, H.-M., Steffens, M., 2023. Dynamic stability of mineral-associated organic matter: enhanced stability and turnover through organic fertilization in a temperate agricultural topsoil. *Soil Biology & Biochemistry*, <https://doi.org/10.1016/j.soilbio.2023.109095>.
18. Rathnayake, D., Schmidt, H. P., Leifeld, J., Mayer, J., Epper, C.A., Bucheli, T.D., Hagemann, N., 2023. Biochar from animal manure: a critical assessment on technical feasibility, economic viability and ecological impact. *GCB Bioenergy* 15: 1078-1104.
19. Leifeld, J., 2023. Carbon farming: Climate change mitigation via non-permanent carbon sinks. *Journal of Environmental Management* 339: 117893.

2022

20. Wang, Y., Paul, S.M., Alewell, C., Leifeld, J., 2022. Reduced nitrogen losses from drained temperate agricultural peatland after mineral soil coverage. *Biology and Fertility of Soils* 59, 153–165.
21. Serk, H., Nilsson, M.B., Figurea, J., Krüger, J.P., Leifeld, J., Alewell, C., Schleucher, J., 2022. Organochemical characterization of peat reveals decomposition of specific hemicellulose structures as the main cause of organic matter loss in the acrotelm. *Environmental Science & Technology*: 17410–17419.
22. Leifeld, J., Keel, S.G., 2022. Quantifying negative radiative forcing of non-permanent and permanent soil carbon sinks. *Geoderma* 423: 115971.
23. Hardy, B., Borchard, N., Leifeld, J., 2022. Identification of thermal signature and quantification of charcoal in soil using differential scanning calorimetry and benzene polycarboxylic acid (BPCA) markers. *SOIL* 8: 451-466.
24. Groß-Schmolders, M., Klein, K., Emsens, W.-J., van Diggelen, R., Aggenbach, C.J.S., Liczner, Y., Frouz, J., Leifeld, J., Alewell, C., 2022. Stable isotopes ($\delta^{13}\text{C}$, $\delta^{15}\text{N}$) and biomarkers as indicators of the hydrological regime of fens in a European east–west transect. *Science of The Total Environment* 838: 156603.
25. Guillaume, T., Makowski, D., Libohova, Z., Elfouki, S., Fontana, M., Leifeld, J., Bragazza, L., Sinaj, S., 2022. Carbon storage in agricultural topsoils and subsoils is promoted by including temporary grasslands into the crop rotation. *Geoderma* 422: 115937.
26. Wang, Y., Paul, S.M., Jocher, M., Alewell, C., Leifeld, J., 2022. Reduced nitrous oxide emissions from drained temperate agricultural peatland after coverage with mineral soil. *Frontiers in Environmental Science* 10: 656599.
27. Klein, K., Schellekens, J., Gross-Schmolders, M., von Sengbusch, P., Alewell, C., Leifeld, J., 2022. Characterizing ecosystem-driven chemical composition differences in natural and drained Finnish bogs using Pyrolysis-GC/MS. *Organic Geochemistry* 165: 104351.
28. Grafmüller, J., Böhm, A., Zhuang, Y., Spahr, S., Müller, P., Otto, T., Bucheli, T.D., Leifeld, J., Giger, R., Tobler, M., Schmidt, H.-P., Dahmen, N., Hagemann, N., 2022. Wood ash as an additive in biomass pyrolysis: effects on biochar yield, properties and agricultural performance. *ACS Sustainable Chemistry & Engineering*: 10, 8, 2720–2729.

2021

29. Rodrigues, L., Hardy, B., Huyghebeart, B., Fohrafellner, J., Fornara, D., Barančíková, G., Bárcena, T.G., De Boever, M., Di Bene, C., Feizienė, D., Kästterer, T., Laszlo, P., O’Sullivan, L., Seitz, D., Leifeld, J., 2021. Achievable agricultural soil carbon sequestration across Europe from country-specific estimates. *Global Change Biology* 27:6363–6380.
30. Schmidt, H.P., Kammann, C., Hagemann, N., Leifeld, J., Bucheli, T.D., Sánchez-Monedero, M.A., Cayuela, M.L., 2021. Biochar in agriculture – a systematic review of 26 meta-analyses. *Global Change Biology Bioenergy* 13: 1708-1730.

31. Gross-Schmölders, M., Klein, K., Birkholz, A., Leifeld, J., Alewell, C., 2021. Rewetting and drainage of nutrient-poor peatlands indicated by specific bacterial membrane fatty acids and a repeated sampling of stable isotopes ($\delta^{15}\text{N}$, $\delta^{13}\text{C}$). *Frontiers Environmental Science* 9: 730106.
32. Wang, Y., Paul, S.M., Jocher, M., Espic, C., Alewell, C., Szidat, S., Leifeld, J., 2021. Soil carbon loss from drained agricultural peatland after coverage with mineral soil. *Science of The Total Environment* 800: 149498.
33. Leifeld, J., Alewell, C., Paul, S.M., 2021. Accumulation of C4-carbon from *Miscanthus* in organic-matter-rich soils. *Global Change Biology Bioenergy* 13: 1319-1328.
34. Huang, Y., Ciais, P., Luo, Y., Zhu, D., Wang, Y., Qiu, C., Goll, D.S., Guenet, B., Makowski, D., De Graaf, I., Leifeld, J., Kwon, M.J., Hu, J., Qu, L., 2021. Tradeoff of CO₂ and CH₄ emissions from global peatlands under water-table drawdown. *Nature Climate Change* 11: 618-622.
35. Egli, M., Wiesenberg, G., Leifeld, J., Gärtner, H., Seibert, J., Rössli, C., Wingate, V., Dollenmeier, W., Griffel, P., Suremann, J., Weber, J., Zyberaj, M., Musso, A., 2021. Formation and decay of peat bogs in the vegetable belt of Switzerland. *Swiss Journal of Geosciences* 114: 2.
36. Paul, S.M., Ammann, C., Alewell, C., Leifeld, J., 2021. Carbon budget response of an agriculturally used fen to different soil moisture conditions. *Agricultural and Forest Meteorology* 300: 108319.
37. Klein, K., Gross-Schmölders, M., Alewell, C., Leifeld, J., 2021. Heating up a cold case: Applications of analytical pyrolysis GC/MS to access molecular biomarkers in peat. *Advances in Agronomy* 165: 115-159.
38. Burgeon, V., Fouché, J., Leifeld, J., Chenu, C., Cornélis, J.-T., 2021. Organo-mineral associations largely contribute to the stabilization of century-old pyrogenic organic matter in cropland soils. *Geoderma* 388: 114841.

2020

39. Loisel, J., Gallego-Sala, A.V., Amesbury, M.J., Magnan, G., Anshari, G., Beilman, D.W., Benavides, J.C., Blewett, J., Camill, P., Charman, D.J., Chawchai, S., Hedgpeth, A., Kleinen, T., Korhola, A., Large, D., Mansilla, C.A., Müller, J., van Bellen, S., West, J.B., Yu, Z., Bubier, J.L., Garneau, M., Moore, T., Sannel, A.B.K., Page, S., Välijranta, M., Bechtold, M., Brovkin, V., Cole, L.E.S., Chanton, J.P., Christensen, T.R., Davies, M.A., De Vleeschouwer, F., Finkelstein, S.A., Frolking, S., Galka, M., Gandois, L., Girkin, N., Harris, L.I., Heinemeyer, A., Hoyt, A.M., Jones, M.C., Joos, F., Juutinen, S., Kaiser, K., Lacourse, T., Lamentowicz, M., Larmola, T., Leifeld, J., Lohila, A., Milner, A.M., Minkkinen, K., Moss, P., Naafs, B.D.A., Nichols, J., O'Donnell, J., Payne, R., Philben, M., Piilo, S., Quillet, A., Ratnayake, A.S., Roland, T.P., Sjögersten, S., Sonntag, O., Swindles, G.T., Swinnen, W., Talbot, J., Treat, C., Valach, A.C., Wu, J., 2020. Expert assessment of future vulnerability of the global peatland carbon sink. *Nature Climate Change* 11: 70-77.
40. Amelung, W., Bossio, D., de Vries, W., Kögel-Knabner, I., Lehmann, J., Amundson, R., Bol, R., Collins, C., Lal, R., Leifeld, J., Minasny, B., PanG., Paustian, K., Rumpel, C., Sanderman, J., van Groenigen, W., Mooney, S., van Wesemael, B., Wander, M., Chabbi, A., 2020. Towards a global-scale soil climate mitigation strategy. *Nature Communications* 11: 5427.
41. Humpenöder, F., Karstens, K., Lotze-Campen, H., Leifeld, J., Menichetti, L., Barthelmes, A., Popp, A., 2020. Peatland protection and restoration are key for climate change mitigation. *Environmental Research Letters* 15, 104093.
42. Gross-Schmölders, M., von Sengbusch, P., Krüger, J.P., Klein, K., Birkholz, A., Leifeld, J., Alewell, C., 2020. Switch of fungal to bacterial degradation in natural, drained and rewetted oligotrophic peatlands reflected in $\delta^{15}\text{N}$ and fatty acid composition. *SOIL* 6: 299-313.
43. Klein, K., Gross-Schmölders, M., De la Rosa, J.M., Alewell, C., Leifeld, J., 2020. Investigating the influence of instrumental parameters and chemical composition on pyrolysis efficiency of peat. *Communications in Soil Science and Plant Analysis* 51:1572-1581.
44. Leifeld, J., Klein, K., Wüst-Galley, C., 2020. Soil organic matter stoichiometry as indicator for peatland degradation. *Scientific Reports*, 10:7634.
45. Ammann, C., Neftel, A., Jocher, M., Fuhrer, J., Leifeld, J., 2020. Effect of management and weather variations on the greenhouse gas budget of two grasslands during a 10-year experiment. *Agriculture, Ecosystems & Environment*, 292: 106814.

46. Wüst-Galley, C., Grünig, A., Leifeld, J., 2020. Land use driven historical soil carbon losses in Swiss peatlands. *Landscape Ecology* 35: 173–187.

2019

47. Leifeld, J., Wüst-Galley, C., Page, S., 2019. Intact and managed peatland soils as a source and sink of GHGs from 1850 to 2100. *Nature Climate Change* 9: 945–947.
48. Keel, S.G., Anken, T., Büchi, L., Chervet, A., Fließbach, A., Flisch, R., Huguenin-Elie, O., Mäder, P., Mayer, J., Sinaj, S., Sturny, W., Wüst-Galley, C., Zihlmann, U., Leifeld, J., 2019. Loss of soil organic carbon in Swiss long-term agricultural experiments over a wide range of management practices. *Agriculture, Ecosystems & Environment* 2019, 286: 106654.
49. Keller, T., Hüppi, R., Leifeld, J., 2019. Relationship between greenhouse gas emissions and changes in soil gas diffusivity in a field experiment with biochar and lime. *Journal of Plant Nutrition and Soil Science* 182: 667-675.
50. Ferré, M., Müller, A., Leifeld, J., Bader, C., Müller, M., Engel, S., Wichmann, S., 2019. Sustainable management of cultivated peatlands in Switzerland: insights, challenges, and opportunities. *Land Use Policy* 87: 104019.
51. Buchkina, N.P., Hüppi, R., Leifeld, J., 2019. Biochar and short-term N₂O and CO₂ emission from plant residue-amended soil with different fertilisation history. *Zemdirbyste-Agriculture* 106: 99-106.
52. Dieguez-Alonso, A., Anca-Couce, A., Frišták, V., Moreno-Jiménez, E., Bacher, M., Bucheli, T.D., Cimò, G., Conte, P., Hagemann, N., Haller, A., Hilber, I., Husson, O., Kammann, C.I., Kienzl, N., Leifeld, J., Rosenau, T., Soja, G., Schmidt, H.-P., 2019. Designing biochar properties through the blending of biomass feedstock with metals: Impact on oxyanions adsorption behavior. *Chemosphere* 214: 743-753.

2018

53. Hirte, J., Leifeld, J., Abiven, S., Oberholzer, H.R., Mayer, J., 2018. Below ground carbon inputs to soil via root biomass and rhizodeposition of field-grown maize and wheat at harvest are independent of net primary productivity. *Agriculture, Ecosystems & Environment* 265: 556-566.
54. Hüppi, R., Felber, R., Krauss, M., Six, J., Leifeld, J., Fuss, R., 2018. Restricting the nonlinearity parameter in soil greenhouse gas flux calculation for more reliable flux estimates. *PlosOne* 13: e0200876, 10.1371/journal.pone.0200876.
55. Leifeld, J., Alewell, C., Bader, C., Krüger, J.P., Müller, C.W., Sommer, M., Steffens, M., Szidat, S., 2018. Pyrogenic carbon contributes substantially to carbon storage in intact and degraded Northern Peatlands. *Land Degradation and Development* 29: 2082-2091.
56. Leifeld, J., Menichetti, L., 2018. The underappreciated potential of peatlands in global climate change mitigation strategies. *Nature Communications* 9: 1071.
57. Leifeld, J., 2018. Distribution of nitrous oxide emissions from managed organic soils under different land uses estimated by the peat C/N ratio to improve national GHG inventories. *Science of the Total Environment* 631-632: 23-26.
58. Krause, H.-M., Hüppi, R., Leifeld, J., El-Hadidi, M., Harter, J., Kappler, A., Hartmann, M., Behrens, S., Mäder, P., Gattinger, A., 2018. Biochar affects community composition of nitrous oxide reducers in a field experiment. *Soil Biology & Biochemistry* 119: 143-151.
59. Bader, C., Müller, M., Schulin, R., Leifeld, J., 2018. Peat decomposability in managed organic soils in relation to land use, organic matter composition and temperature. *Biogeosciences* 15: 703-719.
60. Hirte, J., Leifeld, J., Abiven, S., Mayer, J., 2018. Maize and wheat root biomass, vertical distribution, and size class as affected by fertilization intensity in two long-term field trials. *Field Crops Research* 216: 197-208.
61. Bader, C., Müller, M., Szidat, S., Schulin, R., Leifeld, J., 2018. Response of peat decomposition to corn straw addition in managed organic soils. *Geoderma* 309: 75-83.

2017

62. Keel, S.G., Hirte, J., Abiven, S., Wüst-Galley, C., Leifeld, J., 2017. Proper estimate of residue input as condition for understanding drivers of soil carbon dynamics. *Global Change Biology* 23: 4455-4456.

63. Keel, S.G, Leifeld, J., Mayer, J., Taghizadeh-Toosi, A., Olesen, J.E., 2017. Large uncertainty in soil carbon modelling related to method of calculation of plant carbon input in agricultural systems. *European Journal of Soil Science* 68: 953-963.
64. Menichetti, L., Leifeld, J., Kirova, L., Szidat, S., Zhiyanski, M., 2017. Consequences of planned afforestation versus natural forest regrowth after disturbance for soil C stocks in Eastern European mountains. *Geoderma* 297: 19-27.
65. Hardy, B., Leifeld, J., Knicker, H., Dufey, J.E., Deforce, K., Cornélisen, J-T., 2017. Long term change in chemical properties of preindustrial charcoal particles aged in forest and agricultural temperate soil. *Organic Geochemistry* 107: 33-45.
66. Hirte, J., Leifeld, J., Abiven, S., Oberholzer, HR., Hammelehle, A., Mayer, J., 2017. Overestimation of Crop Root Biomass in Field Experiments Due to Extraneous Organic Matter. *Frontiers in Plant Science* 8: 284.
67. Bader, C., Müller, M., Schulin, R., Leifeld, J., 2017. Amount and stability of recent and aged plant residues in degrading peatland soils. *Soil Biology & Biochemistry* 109: 167-175.
68. Krüger, J.P., Conen, F., Leifeld, J., Alewell, C., 2017. Palsa uplift identified by stable isotope depth profiles and relation of $\delta^{15}\text{N}$ to C/N ratio. *Permafrost and Periglacial Processes* 28: 485-492.
69. Hardy, B., Cornelis, J.T., Houben, D., Leifeld, J., Lambert, R., Dufey, J.E., 2017. Evaluation of the long-term effect of biochar on properties of temperate agricultural soil at pre-industrial charcoal kiln sites in Walonia, Belgium. *European Journal of Soil Science* 68: 80-89.
70. Nemo, Klumpp, K., Coleman, K., Dondini, M., Goulding, K., Hastings, A., Jones, M.B., Leifeld, J., Osborne, B., Saunders, M., Scott, T., Teh, Y.A., Smith, P., 2017. Soil Organic Carbon (SOC) Equilibrium and Model Initialisation Methods: an Application to the Rothamsted Carbon (RothC) Model. *Environmental Modeling & Assessment* 22 : 215-229.

2016

71. Krüger, J.P., Alewell, C., Minkkinen, K., Szidat, S., Leifeld, J., 2016. Calculating carbon changes in peat soils drained for forestry with four different profile-based methods. *Forest Ecology and Management* 381: 29-36.
72. Hüppi, R., Neftel, A., Lehmann, M.F., Krauss, M., Six, J., Leifeld, J., 2016. N use efficiencies and N_2O emissions in two contrasting, biochar amended soils under winter wheat—cover crop—sorghum rotation. *Environmental Research Letters* 11: 084013.
73. Liebig, M.A., Franzluebbers, A.J., Alvarez, C., Chiesa, T.D., Lewczuk, N., Piñeiro, G., Posse, G., Yahdjian, L., Grace, P., Cabral, O.M.R., Martin-Neto, L., de Aragão Ribeiro Rodrigues, R., Amiro, B., Angers, D., Hao, X., Oelbermann, M., Tenuta, M., Munkholm, L.J., Regina, K., Cellier, P., Ehrhardt, F., Richard, G., Dechow, R., Agus, F., Widiarta, N., Spink, J., Berti, A., Grignani, C., Mazzoncini, M., Orsini, R., Roggero, P.P., Seddaiu, G., Tei, F., Ventrella, D., Vitali, G., Kishimoto-Mo, A., Shirato, Y., Sudo, S., Shin, J., Schipper, L., Savé, R., Leifeld, J., Spadavecchia, L., Yeluripati, J., Grosso, S.D., Rice, C., Sawchik, J., 2016. MAGGnet: An international network to foster mitigation of agricultural greenhouse gases. *Carbon Management* 7: 243-248.
74. Menichetti, L., Kätter, T., Leifeld, J., 2016 Parametrization consequences of constraining soil organic matter models by total carbon and radiocarbon using long-term field data. *Biogeosciences* 13: 3003-3019.
75. Kerré, B., Bravo, C., Leifeld, J., Cornelissen, G., Smolders, E., 2016. Historical soil amendment with charcoal increases sequestration of non-charcoal carbon: a comparison among black carbon quantification methods. *European Journal of Soil Science* 67: 324-331.
76. Zhiyanski, M., Glushkova, M., Ferezliev, A., Menichetti, L., Leifeld, J., 2016. Carbon storage and soil property changes following afforestation in mountain ecosystems of the Western Rhodopes, Bulgaria. *iForest* 9: 626-634.
77. Wüst-Galley, C., Mössinger, E., Leifeld, J., 2016. Loss of the soil carbon storage function of drained forested peatlands. *Mires and Peat* 18 (article 7): 1-22.
78. Leifeld, J., 2016. Current approaches neglect possible agricultural cutback under large-scale organic farming. *Proceedings of the Royal Society B*, 283: 20151623.

2015

79. Hüppi, R., Felber, R., Neftel, A., Six, J., Leifeld, J., 2015. Effect of biochar and liming on soil nitrous oxide emissions from a temperate maize cropping system. *SOIL* 1: 707-717.
80. Bachmann, H.J., Bucheli, T.D., Dieguez-Alonso, A., Fabbri, D., Knicker, H., Schmidt, H.-P., Ulbricht, A., Becker, R., Buscaroli, A., Buerge, D., Cross, A., Dickinson, D., Enders, A., Esteves, V.I., Evangelou, M.W.H., Fellet, G., Friedrich, K., Gasco Guerrero, G., Glaser, B., Hanke, U.M., Hanley, K., Hilber, I., Kalderis, D., Leifeld, J., Masek, O., Mumme, J., Paneque Carmona, M., Pereira, R.C., Rees, F., Rombola, A.G., Maria de la Rosa, J., Sakrabani, R., Sohi, S., Soja, G., Valagussa, M., Verheijen, F., Zehetner, F., 2016. Toward the Standardization of Biochar Analysis: The COST Action TD1107 Interlaboratory Comparison. *Journal of Agricultural and Food Chemistry* 64: 513-527.
81. Leifeld, J., Mayer, J., 2015. ¹⁴C in cropland soil of a long-term field trial - experimental variability and implications for estimating carbon turnover. *SOIL* 1: 537-542.
82. De Clercq, T., Heiling, M., Dercon, G., Resch, C., Aigner, M., Mayer, L., Mao, Y., Elsen, A., Steier, P., Leifeld, J., Merckx, R., 2015. Predicting soil organic matter stability in agricultural fields through carbon and nitrogen stable isotopes. *Soil Biology and Biochemistry* 88: 29-38.
83. Krüger, J.P., Leifeld, J., Glatzel, S., Szidat, S., Alewell, C., 2015. Biogeochemical indicators of peatland degradation - a case study of a temperate bog in northern Germany. *Biogeosciences* 12: 2861-2871.
84. Guidi, C., Cannella, D., Leifeld, J., Rodeghiero, M., Magid, J., Gianelle, D., Vesterdal, L., 2015. Carbohydrates and thermal properties indicate a decrease in stable aggregate carbon following forest colonization of mountain grassland. *Soil Biology and Biochemistry* 86: 135-145.
85. Leifeld, J., Meyer, S., Budge, K., Sebastia, M.T., Zimmermann, M., Fuhrer, J., 2015. Turnover of grassland roots in mountain ecosystems revealed by their radiocarbon signature: Role of temperature and management. *PLoS ONE* 10: e0119184.
86. Leifeld, J., Heiling, M., Hajdas, I., 2015. Age and thermal stability of particulate organic matter fractions indicate the presence of black carbon in soil. *Radiocarbon* 57: 99-107.

2014

87. Oberholzer, H.R., Leifeld, J., Mayer, J., 2014. Changes in soil carbon and crop yield over 60 years in the Zurich Organic Fertilization Experiment, following land-use change from grassland to cropland. *Journal of Plant Nutrition and Soil Science* 177: 696-704.
88. Krüger, J.P., Leifeld, J., Alewell, C., 2014. Degradation changes stable carbon isotope depth profiles in peatlands. *Biogeosciences* 11: 3369-3380.
89. Camps Arbestain, M., Saggari, S., Leifeld, J., 2014. Environmental benefits and risks of biochar application to soil. *Agriculture, Ecosystems & Environment* 191: 1-4.
90. Bucheli, T.D., Bachmann, H.J., Blum, F., Buerge, D., Giger, R., Hilber, I., Keita, J., Leifeld, J., Schmidt, H.P., 2014. On the heterogeneity of biochar and consequences for its representative sampling. *Journal of Analytical and Applied Pyrolysis* 107: 25-30.
91. Conen, F., Leifeld, J., 2014. A new facet of soil organic matter. *Agriculture, Ecosystems & Environment* 185: 186-187.
92. Leifeld, J., von Lütow, M., 2014. Chemical and microbial activation energies of soil organic matter decomposition. *Biology and Fertility of Soils* 50: 147-153.
93. Mueller, C.W., Gutsch, M., Kothieringer, K., Leifeld, J., Rethemeyer, J., Brueggemann, N., Kögel-Knabner, I., 2014. Bioavailability and isotopic composition of CO₂ released from incubated soil organic matter fractions. *Soil Biology & Biochemistry* 69: 168-178.
94. Felber, R., Leifeld, J., Horák, J., Neftel, A., 2014. N₂O emission reduction with greenwaste biochar: comparison of laboratory and field experiment. *European Journal of Soil Science* 65: 128-138.

2013

95. Poeplau, C., Don, A., Dondini, M., Leifeld, J., Nemo, R., Schumacher, J., Senapati, N., Wiesmeier, M., 2013. Reproducibility of a soil organic carbon fractionation method to derive RothC carbon pools. *European Journal of Soil Science* 64: 735-746.

96. Regnier, P., Friedlingstein, P., Ciais, P., Mackenzie, F.T., Gruber, N., Janssens, I.A., Laruelle, G.G., Lauerwald, R., Luysaert, S., Andersson, A.J., Arndt, S., Arnosti, C., Borges, A.V., Dale, A.W., Gallego-Sala, A., Godderis, Y., Goossens, N., Hartmann, J., Heinze, C., Ilyina, T., Joos, F., LaRowe, D.E., Leifeld, J., Meysman, F.J.R., Munhoven, G., Raymond, P.A., Spahni, R., Suntharalingam, P., Thullner, M., 2013. Anthropogenic perturbation of the carbon fluxes from land to ocean. *Nature Geoscience* 6: 597-607.
97. Meyer, S., Leifeld, J., 2013. Concurrent increase in ¹⁵N and radiocarbon age in soil density fractions. *Journal of Plant Nutrition and Soil Science* 176: 105-108.
98. Leifeld, J., 2013. Prologue paper: Soil carbon losses from land-use change and the global agricultural greenhouse gas budget. *Science of the Total Environment* 465: 3-6.
99. Leifeld, J., Bassin, S., Conen, F., Hajdas, I., Egli, M., Fuhrer, J., 2013. Control of soil pH on turnover of belowground organic matter in subalpine grassland. *Biogeochemistry* 112: 59-69.
100. Leifeld, J., Angers, D.A., Chenu, C., Fuhrer, J., Katterer, T., Powelson, D.S., 2013. Organic farming gives no climate change benefit through soil carbon sequestration. *Proceedings of the National Academy of Sciences of the United States of America* 110: 301-301.
101. Leifeld, J., 2013. Low-input farming: a way towards climate friendly agriculture? *Carbon Management* 4: 31-41.

2012

102. Leifeld, J., Steffens, M., Galego-Sala, A., 2012. Sensitivity of peatland carbon loss to organic matter quality. *Geophysical Research Letters* 39, L14704, DOI:10.1029/2012GL051856.
103. Leifeld, J., 2012. How sustainable is organic farming? *Agriculture, Ecosystems & Environment* 150: 121-122.
104. Hilber, I., Blum, F., Leifeld, J., Schmidt, H.-P., Bucheli, T.D., 2012. Quantitative Determination of PAHs in Biochar: A Prerequisite To Ensure Its Quality and Safe Application. *Journal of Agricultural and Food Chemistry* 60: 3042-3050.
105. Meyer, S., Leifeld, J., Bahn, M., Fuhrer, J., 2012. Land-use change in subalpine grassland soils: Effect on particulate organic carbon fractions and aggregation. *Journal of Plant Nutrition and Soil Science* 175: 401-409.
106. Leifeld, J. and Grünig, A., 2012. Response to Interpreting the ash trend within ombrotrophic bog profiles: atmospheric dust depositions vs. mineralization processes. The Etang de la Gruère case study. *Plant and Soil* 353: 11-14.
107. Meyer, S., Leifeld, J., Bahn, M., Fuhrer, J., 2012. Free and protected soil organic carbon dynamics respond differentially to abandonment of mountain grassland. *Biogeosciences* 9: 853-865.
108. Zimmermann, M., Leifeld, J., Conen, F., Bird, M., Meir, P., 2012. Can composition and physical protection of soil organic matter explain soil respiration temperature sensitivity? *Biogeochemistry* 107: 423-436.

2011

109. Conen, F., Morris, C.E., Leifeld, J., Yakutin, M.V., Alewell, C., 2011. Biological residues define the ice nucleation properties of soil dust. *Atmospheric Chemistry and Physics* 11: 9643-9648.
110. Conant, R.T., Ryan, M.G., Ågren, G.I., Birge, H.E., Davidson, E.A., Eliasson, P.E., Evans, S.E., Frey, S.D., Giardina, C.P., Hopkins, F.M., Hyvönen, R., Kirschbaum, M.U.F., Lavalley, J.M., Leifeld, J., Parton, W.J., Megan Steinweg, J., Wallenstein, M.D., Martin Wetterstedt, J.Å., Bradford, M.A., 2011. Temperature and soil organic matter decomposition rates – synthesis of current knowledge and a way forward. *Global Change Biology* 17: 3392-3404.
111. Budge, K., Leifeld, J., Hiltbrunner, E., Fuhrer, J., 2011. Alpine grassland soils contain large proportion of labile carbon but indicate long turnover times. *Biogeosciences* 8: 1911-1923.
112. Leifeld, J., Ammann, C., Neftel, A., Fuhrer, J., 2011. A comparison of repeated soil inventory and carbon flux budget to detect soil carbon stock changes after conversion from cropland to grasslands. *Global Change Biology* 17: 3366-3375.
113. Alewell, C., Giesler, R., Klaminder, J., Leifeld, J., Rollog, M., 2011. Stable carbon isotopes as indicators for environmental change in peatlands. *Biogeosciences* 8: 1769-1778.

114. Budge, K., Leifeld, J., Egli, M., Fuhrer, J., 2011. Soil microbial communities in (sub)alpine grasslands indicate a moderate shift towards new environmental conditions 11 years after soil translocation. *Soil Biology & Biochemistry* 43: 1148-1154.
115. Poeplau, C., Don, A., Vesterdal, L., Leifeld, J., Van Wesemael, B., Schumacher, J., Gensior, A., 2011. Temporal dynamics of soil organic carbon after land-use change in the temperate zone - carbon response functions as a model approach. *Global Change Biology* 17 : 2415-2427.
116. Leifeld, J., Müller, M., Fuhrer, J., 2011. Peatland subsidence and carbon loss from drained temperate fens. *Soil Use and Management* 27: 170-176.
117. Conen, F., Yakutin, M.V., Puchnin, A.N., Leifeld, J., Alewell, C., 2011. $\delta^{15}\text{N}$ natural abundance in permafrost soil indicates impact of fire on N cycle. *Rapid Communications in Mass Spectrometry* 25: 661-664.
118. Leifeld, J., Gubler, L., Grünig, A., 2011. Organic matter losses from temperate ombrotrophic peatlands: An evaluation of the ash residue method. *Plant and Soil* 341: 349-361.
119. Fernández, J.M., Plante, A.F., Leifeld, J., Rasmussen, C., 2011. Methodological considerations for using thermal analysis in the characterization of soil organic matter. *Journal of Thermal Analysis and Calorimetry* 104: 389-398.
120. Sanaullah, M., Chabbi, A., Leifeld, J., Bardoux, G., Billou, D., Rumpel, C., 2011. Decomposition and stabilization of root litter in top- and subsoil horizons: what is the difference? *Plant and Soil* 338: 127-141.

2009-2010

121. Leifeld, J., Fuhrer, J., 2010. Organic farming and soil carbon sequestration – what do we really know about the benefits? *Ambio* 39: 585-599.
122. Alexis, M.A., Rumpel, C., Knicker, H., Leifeld, J., Rasse, D., Pechot, N., Bardoux, G., Mariotti, A., 2010. Thermal alteration of organic matter during a shrubland fire: A field study. *Organic Geochemistry* 41: 690-697.
123. Leifeld J., Reiser, R., Oberholzer, HR., 2009. Consequences of conventional vs. organic farming on soil carbon: Results from a 27-year field experiment. *Agronomy Journal* 101: 1204-1218.
124. Plante, A.F., Fernández, J.M., Leifeld, J., 2009. Application of thermal analysis techniques in soil science. *Geoderma* 153: 1-10.
125. Ammann, A., Spirig, C., Leifeld, J., Neftel, A., 2009. Assessment of the nitrogen and carbon budget of two managed temperate grassland fields. *Agriculture, Ecosystems & Environment* 133: 150-162.
126. Kammer, A., Hagedorn, F., Shevchenko, I., Leifeld, J., Guggenberger, G., Goryacheva, T., Rigling, A., Moiseev, P., 2009. Treeline shifts in the Ural mountains affect soil organic matter dynamics. *Global Change Biology* 15: 1570-1583.
127. Leifeld, J., Fuhrer, J., 2009. Long-term management effects on soil organic matter in two cold, high-elevation grasslands: Clues from fractionation and radiocarbon dating. *European Journal of Soil Science* 60: 230-239.
128. Leifeld, J., Zimmermann, M., Fuhrer, J., Conen, F., 2009. Storage and turnover of carbon in grassland soils along an elevation gradient in the Swiss Alps. *Global Change Biology* 15: 668-679.

2007-2008

129. Leifeld, J., Zimmermann, M., Fuhrer, J., 2008. Simulating decomposition of labile soil organic carbon: Effects of pH. *Soil Biology and Biochemistry* 40: 2948-2951.
130. Conen, F., Karhu, K., Leifeld, J., Seth, B., Vanhala, P., Liski, J., Alewell, C., 2008. Temperature sensitivity of young and old soil carbon – Same soil, slight differences in ^{13}C natural abundance method, inconsistent results. *Soil Biology and Biochemistry* 40: 2703-2705.
131. Bolliger, J., Hagedorn, F., Leifeld, J., Bohl, J., Zimmermann, S., Soliva, R., Kienast, F., 2008. Effects of land-use change on carbon stocks in Switzerland. *Ecosystems* 11: 895-907.
132. Leifeld, J., 2008. Biased ^{14}C -derived organic carbon turnover estimates following black carbon input to soil: An exploration with RothC. *Biogeochemistry* 88: 205-211.
133. Leifeld, J., 2008. Calorimetric characterization of grass during its decomposition. *Journal of Thermal Analysis and Calorimetry* 93: 651-655.

134. Conen, F., Zimmermann, M., Leifeld, J., Seth, B., Alewell, C., 2008. Relative stability of soil carbon revealed by shifts in Delta N-15 and C : N ratio. *Biogeosciences* 5: 123-128.
135. Hermle, S., Anken, T., Weisskopf, P., Leifeld, J., 2008. The effect of the tillage system on soil organic carbon content under moist, cold-temperate conditions. *Soil and Tillage Research* 98: 94-105.
136. Leifeld, J., Fenner, S., Müller, M., 2007. Mobility of black carbon in drained peatland soils. *Biogeosciences* 4: 425-432.
137. Zimmermann, M., Leifeld, J., Abiven, S., Schmidt, M.W.I., Fuhrer, J., 2007. Sodium hypochlorite separates an older soil organic matter fraction than acid hydrolysis. *Geoderma* 139: 171-179.
138. Conen, F., Yakutin, M.V., Zumbunn, T., Leifeld, J., 2007. Organic carbon and microbial biomass in two soil development chronosequences following glacial retreat. *European Journal of Soil Science* 58: 758-762
139. Zimmermann, M., Leifeld, J., Schmidt, M.W.I., Smith, P., Fuhrer, J., 2007. Measured soil organic matter fractions can be related to pools in the RothC model. *European Journal of Soil Science* 58: 658-667.
140. Flechard, C.R., Ambus, P., Skiba, U., Rees, R.M., Hensen, A., van Amstel, A., van den Pol-van Dasselaar, A., Soussana, J.-F., Jones, M., Clifton-Brown, J., Raschi, A., Horvath, L., Neftel, A., Jocher, M., Ammann, C., Leifeld, J., Fuhrer, J., Calanca, P., Thalman, E., Pilegaard, K., Di Marco, C., Campbell, C., Nemitz, E., Hargreaves, K.J., Levy, P.E., Ball, B.C., Jones, S.K., van de Bulk, W.C.M., Groot, T., Blom, M., Domingues, R., Kasper, G., Allard, V., Ceschia, E., Cellier, P., Laville, P., Henault, C., Bizouard, F., Abdalla, M., Williams, M., Baronti, S., Berretti, F., Grosz, B., 2007. Effects of climate and management intensity on nitrous oxide emissions in grassland systems across Europe. *Agriculture, Ecosystems & Environment* 121: 135-152.
141. Ammann, C., Flechard, C.R., Leifeld, J., Neftel, A., Fuhrer, J., 2007. The carbon budget of newly established temperate grassland depends on management intensity. *Agriculture Ecosystems & Environment* 121: 5-20.
142. Leifeld, J., 2007. Thermal stability of black carbon characterised by oxidative differential scanning calorimetry. *Organic Geochemistry* 38: 112-127.
143. Flechard, C.R., Neftel, A., Jocher, M., Ammann, C., Leifeld, J., Fuhrer, J., 2007. Temporal changes in soil pore space CO₂ concentration and storage under permanent grassland. *Agricultural and Forest Meteorology* 142: 66-84.
144. Zimmermann, M., Leifeld, J., Fuhrer, J., 2007. Quantifying soil organic carbon fractions by infrared spectroscopy. *Soil Biology and Biochemistry* 39: 224-231.

2005-2006

145. Leifeld, J., Zimmermann, M., 2006. Thermal analysis of mineral soils before and after oxidation with sodium hypochlorite. *Journal of Thermal Analysis and Calorimetry* 86: 845-848.
146. Conen, F., Leifeld, J., Seth, B., Alewell, C., 2006. Warming mobilizes young and old soil carbon equally. *Biogeosciences* 3: 515-519.
147. Leifeld, J., Franko, U., Schulz, E., 2006. Thermal stability responses of soil organic matter to long-term fertilization practices. *Biogeosciences* 3: 371-374.
148. Leifeld, J. 2006. Application of diffuse reflectance FT-IR spectroscopy and partial least squares to predict NMR properties of soil organic matter. *European Journal of Soil Science* 57: 846-857.
149. Leifeld, J., Fuhrer, J., 2005. The temperature response of CO₂ production from bulk soils and soil fractions is related to soil organic matter quality. *Biogeochemistry* 75: 433-453.
150. Kölbl, A., Leifeld, J., Kögel-Knabner, I., 2005. A comparison of two methods for the isolation of free and occluded particulate organic matter. *Journal of Plant Nutrition and Soil Science* 168: 660-667.
151. Leifeld, J., Kögel-Knabner, I., 2005. Soil organic matter fractions as early indicators for carbon stock changes under different land-use? *Geoderma* 124: 143-155.
152. Leifeld, J., Bassin, S., Fuhrer, J., 2005. Carbon stocks in Swiss agricultural soils predicted by land-use, soil characteristics, and altitude. *Agriculture, Ecosystems & Environment* 105: 255-266.

pre-2004

153. Leifeld, J., Fuhrer, J., 2004. Greenhouse gas emissions from Swiss agriculture since 1990 – Implications for environmental policies to mitigate global warming. *Environmental Science and Policy* 8: 410-417.
154. Leifeld, J., 2003. Comment on 'Recalcitrant soil organic materials mineralize more efficiently at higher temperatures'. *Journal of Plant Nutrition and Soil Science* 166: 777-778.
155. Leifeld, J., Kögel-Knabner, I., 2003. Microaggregates in agricultural soils and their size distribution determined by X-ray attenuation. *European Journal of Soil Science* 54: 167-174.
156. Leifeld, J., Siebert, S., Kögel-Knabner, I., 2002. Biological activity and organic matter mineralization of soils amended with biowaste composts. *Journal of Plant Nutrition and Soil Science* 165: 151-159.
157. Leifeld, J., Siebert, S., Kögel-Knabner, I., 2002. Changes in the chemical composition of soil organic matter after application of compost. *European Journal of Soil Science* 53: 299-309.
158. von Lützw, M., Leifeld, J., Kainz, M., Kögel-Knabner, I., Munch, J.C., 2002. Indications for soil organic matter quality in soils under different management. *Geoderma* 105: 243-258.
159. Leifeld, J., Kögel-Knabner, I., 2001. Organic carbon and nitrogen in fine soil fractions after treatment with hydrogen peroxide. *Soil Biology and Biochemistry* 33: 2155-2158.
160. Leifeld, J., Siebert, S., Kögel-Knabner, I., 2001. Stabilisation of composted organic matter after application to a humus-free sandy mining soil. *Journal of Environmental Quality* 30: 602-607.
161. Leifeld, J., Siebert, S., Kögel-Knabner, I., 1998. Humuschemische Parameter von zwei mehrjährigen Feldversuchen mit Kompostanwendung. *Zeitschrift für Kulturtechnik und Landentwicklung* 39: 64-68.
162. Siebert, S., Leifeld, J., Kögel-Knabner, I., 1998. Stickstoffmineralisierung von Bioabfallkomposten unterschiedlicher Rottegrade nach Anwendung auf landwirtschaftlich genutzte und rekultivierte Böden. *Zeitschrift für Kulturtechnik und Landentwicklung* 39: 69-74.
163. Siebert, S., Knicker, H., Hatcher, M.A., Leifeld, J., Kögel-Knabner, I., 1998. Characterization of soil organic nitrogen after addition of biogenic waste composts by means of NMR and GC/MS. In: B.A. Stankiewicz, P.F. van Bergen (Eds.): *Fate of N-containing macromolecules in the biosphere and geosphere*, ACS Symp. Ser. 707, 293-308. Las Vegas.

Book chapters

164. Leifeld, J. & Lupascu, M., 2023. Climate impact of peatland agriculture. In: Strack, M. (ed): *Peatlands and climate change. Scientific facts and figures for decision-makers*. 2nd. edition. International Peatland Society, Jyväskylä, Finland, pp. 151-191.
165. Paul, S.M., Leifeld, J. 2022. Management of organic soils to reduce soil organic carbon losses. In: Rumpel, C. (Ed.): *Understanding and fostering soil carbon sequestration*. Burleigh Dodds Science Publishing, Cambridge, UK, 63 p.
166. Wüst-Galley, C., Leifeld, J., 2019. Entwicklung der Kohlenstoffvorräte und Treibhausgasemissionen der Moorböden seit 1850. In: Stuber, M., Bürgi, M. (Eds.): *Vom «eroberten Land» zum Renaturierungsprojekt – Geschichte der Feuchtgebiete in der Schweiz seit 1700*. Paul Haupt Verlag Bern, Bristol-Schriftenreihe 59, pp. 231-242.
167. Leifeld, J., Mayer, J., 2017. Streu landwirtschaftlicher Nutzflächen. In: Blume, H.P., Felix-Henningsen, P., Frede, H-G., Guggenberger, G., Horn, R., Stahr, K. (Eds.): *Handbuch der Bodenkunde*, 42. Ergänzungslieferung, Wiley-VCH, pp. 2:2:2.2: 1-14.
168. Leifeld, J., Schulin, R., 2017. Humusverlust in landwirtschaftlichen Mineralböden In: Krebs, R., Egli, M., Schulin, R., Tobias, S. (Eds.): *Bodenschutz für die Praxis*. Paul Haupt Verlag Bern, pp. 224-229.
169. Schulin, R., Leifeld, J., 2017. Sackung organischer Böden. In: Krebs, R., Egli, M., Schulin, R., Tobias, S. (Eds.): *Bodenschutz für die Praxis*. Paul Haupt Verlag Bern, pp. 229-239.
170. Rumpel, C., Leifeld, J., Santin, C., Doerr, S., 2015. Movement of biochar in the environment. In: Lehmann, J. & Joseph, S. (Eds.): *Biochar for environmental management: Science, technology and implementation*. Routledge, pp. 283-299.
171. Vesterdal, L., Leifeld, J., Poeplau, C., Don, A., van Wesemael, B., 2011. Land-use change effects on soil carbon stocks in temperate regions – development of carbon response functions. In: Jandl, R., Rodeghiero,

- M., Olsson, M. (Eds.): Soil carbon in sensitive European ecosystems. From science to land management. Wiley-Blackwell, pp. 33-48.
172. Sjögersten-Turner, S., Alewell, C., Cécillon, L., Hagedorn, F., Jandl, R., Leifeld, J., Martinsen, V., Schindlbacher, A., Teresa Sebastià, M., van Mieghroet, H., 2011. Mountain soils in a changing climate – vulnerability of carbon stocks and ecosystem feedbacks. In: Jandl, R., Rodeghiero, M., Olsson, M. (Eds.): Soil carbon in sensitive European ecosystems. From science to land management. Wiley-Blackwell, pp. 118-148.
173. Alm, J., Byrne, K.A., Hayes, C., Leifeld, J., Shurpali, N.J., 2011. Greenhouse gas balance in disturbed peatlands. In: Jandl, R., Rodeghiero, M., Olsson, M. (Eds.): Soil carbon in sensitive European ecosystems. From science to land management. Wiley-Blackwell, pp. 149-174.
174. Jandl, R., Alm, J., Vesterdal, L., Olsson, M., Weiss, P., Sjögersten, S., Rodeghiero, M., Leifeld, J., Hagedorn, F., Bellamy, P., Baritz, R., 2011. Soil carbon in sensitive European ecosystems: from science to land management – a summary. In: Jandl, R., Rodeghiero, M., Olsson, M. (Eds.): Soil carbon in sensitive European ecosystems. From science to land management. Wiley-Blackwell, pp. 267-282.
175. Leifeld, J., 2010. Kohlenstoffsequestrierung in landwirtschaftlichen Böden – eine kritische Betrachtung. In: Emissionen landwirtschaftlich genutzter Böden. KTBL-Schrift 483. Kuratorium für Technik und Bauwesen in der Landwirtschaft e.V., Darmstadt, pp. 182-191.
176. Leifeld, J., 2009. Einfluss der Bewirtschaftung auf den Bodenkohlenstoff in der Landwirtschaft. In: Humus in Böden: Garant der Fruchtbarkeit, Substrat für Mikroorganismen, Speicher von Kohlenstoff. Rundgespräche der Kommission für Ökologie, Band 35. Verlag Dr. Friedrich Pfeil, München, pp. 85-91.
177. Vesterdal, L., Leifeld, J., 2007. Land-use change and management effects on soil carbon sequestration: Forestry and agriculture. In: Jandl R., Olsson M. (Eds.): COST Action 639: Greenhouse-gas budget of soils under changing climate and land use (BurnOut). Federal Research and Training Centre for Forests, Natural Hazards and Landscape, Vienna, pp.25-32.
178. Leifeld, J., 2006. Soils as sources and sinks of greenhouse gases. In: Frossard, E., Blum, W.E.H. and Warkentin, B. (Eds.): Functions of soils for human societies and the environment. Geological Society, London, Special Publications, 266: 23–44.

Non peer-reviewed articles, reports, extended abstracts

179. Torrés Castillo, M., Álvaro-Fuentes, J., Martínez-García, L. B., Poláková, J., Svoboda, A., Leifeld, J., Larysch, E., Pardon, P., Dankers, Caroline, Lesschen, J. P., Panagea, I., & Gómez Calero, José A., 2025. Carbon Farming Mitigation Potential: Evaluating the mitigation potential (and uncertainties) of carbon farming practices (v2.0). Zenodo. <https://doi.org/10.5281/zenodo.15393411>.
180. Mc Donald, H., Murillo Pazmino, J., Scheid, A., Andrés, P., De Gregoris, T.B., Beck, R., Grimault, J., Mal, M., Sagarna, J., Xu, H., Benson, S., Chenu, C., Degn, I., Joubin, M., Leifeld, J., Snell, W., Ajemian, C., Hewelett, O., Kryger, N.V., 2024. Ensuring carbon farming delivers sustainability benefits. Recommendations for carbon farming certification methodologies. Policy Brief of the EU project Credible, 11 pp.
181. Keel, S.G., Ammann, C., Bretscher, D., Gross, T., Guillaume, T., Huguenin-Elie, O., Moll-Mielewicz, J., Nemecek, T., Roesch, A., Volk, M., Wüst-Galley, C., Leifeld, J., 2024. Dauergrünlandböden der Schweiz: Quelle oder Senke von Kohlendioxid? Agroscope Science 189.
182. Lang, K., van de Craats, D., Honkanen, H., Elsgaard, L., Hessel, R., Kekkonen, H., Larmola, T., Leifeld, J., Laerke, P.E., Rodriguez, A., Saarnio, S., Zhao, J., 2024. Rewetting of drained peatlands provides permanent and fast GHG mitigation. EJP Soil Policy Brief June 2024, 4 pp.
183. Thiébaud, E., Hafner, D., Huber, S., Giluliani, G., Meier, T., Ringger, C., Stüssi, M., Liebisch, F., Leifeld, J., Oberholzer, H.R., Kreft, C., Huber, R., Finger, R., Bertschi, M., Meili, J., Koller, C., Kromrey, V., Reiche, A., 2023. CO₂-Endbericht Ressourcenprojekt 'AgroCO₂cept Flaachtal'. Sofies-Emac AG und Flury & Giuliani, Zürich, 125 pp.
184. Don, A., Seidel, F., Leifeld, J., Kätterer, T., Martin, M., Pellerin, S., Emde, D., Seitz, D., Chenu, C., 2023. When does soil carbon contribute to climate change mitigation? EJP Soil Policy Brief December 2023, 4 pp.
185. Bretscher D., Hagemann N., Keel S.G., Leifeld J., 2023. Pflanzenkohle. Agroscope, Merkblatt Nr. 191, 4 pp..

186. Tanneberger, F., Larmola, T., Sirin, A. (lead authors) and Arias-Navarro, C., Farrell, C., Glatzel, S., Kozulin, A., Laerke, P.E., Leifeld, J., Mäkipää, R., Minayeva, T., Moen, A., Oskarsson, H., Pakalne, M., Sendžikaitė, J. (corresponding authors), 2022. Chapter 5. Regional assessment for Europe. In: UNEP (2022). Global Peatlands Assessment – The State of the World’s Peatlands: Evidence for action toward the conservation, restoration, and sustainable management of peatlands. Main Report. Global Peatlands Initiative. United Nations Environment Programme, Nairobi, 124-154.
187. Roberti, G., Gramlich, A., Benz, R., Szerencsits, E., Churko, G., Prasuhn, V., Leifeld, J., Zorn, A., Walter, T., Jacot, K., Herzog, F., Fabian, Y., 2022. Entscheidungshilfe für feuchte und nasse Ackerflächen Unterstützung bei der Identifikation von Flächen, auf denen Alternativen zur Entwässerung in Betracht zu ziehen sind. *Agroscope Transfer* 449.
188. Fabian, Y., Roberti, G., Jacot, K., Gramlich, A., Benz, R., Szerencsits, E., Churko, G., Prasuhn, V., Leifeld, J., Zorn, A., Walter, T., Herzog, F., 2022. Die Nutzung von vernässenden Ackerflächen neu denken: Synthese des Projektes Feucht(Acker)flächen. *Agrarforschung Schweiz* 13: 198-209.
189. Leifeld, J., Wüst-Galley, C., 2021. Kohlenstoffsенke Moorboden: Zustand und Entwicklung. *Hotspot* 43: 6.
190. Wüst-Galley, C., Keel, S.G., Leifeld, J., 2021. Modelling SOC in Switzerland’s mineral agricultural soils using RothC: Sensitivity analysis. *Agroscope Science*, 113: 1-64.
191. Schmidt, H.P., Hagemann N., Abächerli, F., Leifeld J., Bucheli T.D., 2021. Pflanzenkohle in der Landwirtschaft: Hintergründe zur Düngertilassung und Potentialabklärung für die Schaffung von Kohlenstoff-Senken. *Agroscope Science*, 112: 1-71.
192. Spuhler, M., Fliessbach, A., Steffens, M., Leifeld, J., Weisskopf, P., 2020. Faktenblatt Humus und Klima. *Agridea*, 1-11.
193. Wüst-Galley, C., Keel, S.G., Leifeld, J., 2021. A model-based carbon inventory for Switzerland’s mineral agricultural soils using RothC. *Agroscope Science*, 105: 1-110.
194. Beuttler, C., Keel, S.G., Leifeld, J., Schmid, M., Berta, N., Gutknecht, V., Wohlgemuth, N., Brodmann, U., Stadler, Z., Tinibaev, D., Wlodarczak, D., Honegger, M., Stettler, C., 2019. The role of atmospheric carbon dioxide removal in Swiss climate policy – fundamentals and recommended actions. Report by Risk Dialogue Foundation. Commissioned by the Federal Office for the Environment, Bern, 85 pp.
195. Leifeld, J., Müller, A., Steffens, M., 2019. Kriterien für die Zertifizierung von Kohlenstoffsенken in Landwirtschaftsböden. *Agrarforschung* 10: 346-349.
196. Leifeld, J., Vogel, D., Bretscher, D., 2019. Treibhausgasemissionen entwässerter Böden. *Agroscope Science* 74, 1-16.
197. Ruppert-Schmitt, V., Leifeld, J., 2018. Ohne Torf gärtner schützt Klima und Moore. *Zürcher Umweltpraxis* 91, 13-14.
198. Akademien der Wissenschaften Schweiz, 2018. Emissionen rückgängig machen oder die Sonneneinstrahlung beeinflussen: Ist «Geoengineering» sinnvoll, überhaupt machbar und, wenn ja, zu welchem Preis? Autoren: Beuttler, C., Honegger, M., Leifeld, J., Lohmann, U., Michaelowa, A., Patt, A., Peter, T., Plattner, G.-K., Repmann, M., Schubert, R., Wallimann, H. Redaktion: U. Neu. *Swiss Academies Factsheets* 13 (4).
199. Leifeld, J., Oberholzer, H.R., 2016. Böden als biologische Kohlenstoffsенken. Gastkommentar *Neue Zürcher Zeitung*, 20.12.2016.
200. Robledo Abad, C., Bretscher, D., Leifeld, J., 2016. Land- und Forstwirtschaft und andere Landnutzung. In: *Swiss Academies Report* 11: 181-185.
201. Wüst-Galley, C., Grünig, A., Leifeld, J. 2015. Locating organic soils for the Swiss Greenhouse Gas Inventory. *Agroscope Science* 26, 1-99.
202. Bretscher, D., Felder, D., Filliger, P., Leifeld, J., Schellenberger, A., Zundel, C., 2014. Anrechnung von Kohlenstoffquellen und –senken aus landwirtschaftlich genutzten Flächen in der zweiten Verpflichtungsperiode des Kyoto-Protokolls (2013 – 2020). Positionspapier der Arbeitsgruppe Klimareporting Landwirtschaft. Federal Office for the Environment and Agroscope, 13 pp.
203. Krüger, J.P., Leifeld, J., Glatzel, S., Alewell, C., 2015. Soil carbon loss from managed peatlands along a land-use gradient – a comparison of three different methods. *Bodenkundliche Gesellschaft der Schweiz, Bulletin* 36: 45-50.

204. De Clercq, T., Heiling, M., Aigner, M., Steier, P., Leifeld, J., Merckx, R., Mayr, L., Resch, C., Cepuder, P., Spiegel, A., Bock, H., Dercon, G., 2014. Assessment of soil organic carbon stability in agricultural systems by using natural abundance signals of stable carbon and nitrogen isotopes. In: IAEA Soils Newsletter 36, 1, pp. 8-10. International Atomic Energy Agency.
205. Leifeld, J., Bader, C., Borraz, E., Hoffmann, M., Giebels, M., Sommer, M., Augustin, J., 2014. Are C-loss rates from drained peatlands constant over time? The additive value of soil profile based and flux budget approach. *Biogeosciences Discuss.* 11, 12341-12373.
206. Wüst-Galley, C., Meier, S., Leifeld, J., Grünig, A., 2013. Area and location of peatlands in Switzerland. *Bodenkundliche Gesellschaft der Schweiz, Bulletin* 34: 9-14.
207. Köck, K., Leifeld, J., Fuhrer, J., 2013. Modellierung bodenbürtiger C-Quellen und Senken für das Treibhausgasinventar. *Bodenkundliche Gesellschaft der Schweiz, Bulletin* 34: 39-43.
208. Ammann, C., Leifeld, J., Jocher, M., Neftel, A., Fuhrer, J., 2013. Effect of grassland renovation on the greenhouse gas budget of an intensive forage production system. *Proceedings of 5th Greenhouse Gases and Animal Agriculture. Advances in Animal Biosciences.* 4: 284.
209. Köck, K., Leifeld, J., Fuhrer, J., 2013. A model-based inventory of sinks and sources of CO₂ in agricultural soils: development of a concept. ART online-Publikation. Forschungsanstalt Agroscope, Zürich, 189 pp.
210. Leifeld, J., Hüppi, R., 2012. Pflanzenkohle: Möglicher Player im landwirtschaftlichen Klimaschutz? *Compostmagazine* 2/2012: 11-12.
211. Schmidt, H.P., Bucheli, T.D., Kammann, C., Glaser, B., Abiven, S., Leifeld, J., 2012: Guidelines for biochar production - European Biochar Certificate. Delinat Institute und Biochar Science Network, Ayent, 16 pp.
212. Leifeld, J., 2012. Book review: Piccolo, A. (ed.). Carbon sequestration in agricultural soils: a multidisciplinary approach to innovative methods. *European Journal of Soil Science* 63: 536.
213. Meyer, S., Leifeld, J., Hajdas, I., 2012. Radiocarbon in studies on land-use change. Annual report Ion Beam Physics 2011, ETH Zurich, p. 51.
214. Felber, R., Hüppi, R., Leifeld, J., Neftel, A., 2012. Nitrous oxide emission reduction in temperate biochar-amended soils. *Biogeosciences Discussions* 9: 151-189.
215. Leifeld, J., 2011. Interactive comment on "Fire-derived organic carbon turnover in soils on a centennial scale" by N. Singh et al. *Biogeosciences Discussions* 8: C5003–C5004.
216. Weisskopf, P., Meuli, R., Dubois, D., Bucheli, T.D., Leifeld, J., Mayer, J., 2011. *Bodenforschung an der Forschungsanstalt Agroscope Reckenholz-Tänikon (ART). Bulletin der Bodenkundlichen Gesellschaft der Schweiz* 32: 91-98.
217. Hüppi, R., Leifeld, J., Felber, R., Neftel, A., 2011. Reduction of N₂O-emissions in biochar-amended soils. In: Nitrogen & global change. Key findings – future challenges. Conference proceedings Edinburgh April 11 – 15, 2011, 2 pp., available at <http://nitrogen.ceh.ac.uk/nitrogen2011/>.
218. Ammann, C., Neftel, A., Spirig, C., Leifeld, J., Fuhrer, J., 2009. Stickstoffbilanz von Mähwiesen mit und ohne Düngung. *Agrarforschung* 16: 348-353.
219. Leifeld, J., 2009. Interactive comment on 'The sensitivity of microbial processes in Icelandic soils to increasing temperatures' by Guicharnaud et al. *Biogeosciences Discussions* 6: C1236-C1238.
220. Anken, T., Hermle, S., Leifeld, J., Weisskopf, P., 2009. The effects of tillage systems on soil organic carbon content under moist, cold-temperate conditions. 18th Triennial Conference, June 15-19, 2009, Izmir-Turkey. International Soil Tillage Research Organisation (ISTRO): 1-8.
221. Ammann C., Spirig C., Fischer C., Leifeld, J., Neftel, A., 2007. 'Contradiction to IPCC methodology?' Interactive comment on "N₂O release from agro-biofuel production negates global warming reduction by replacing fossil fuels" by P. J. Crutzen et al. *Atmospheric Chemistry and Physics Discussions* 7: 4779-4781.
222. Leifeld, J., 2005. Comment on 'On the available evidence for the temperature dependence of soil organic carbon' by W. Knorr et al. *Biogeosciences Discussions* 2, S348-S352.
223. Leifeld, J., 2005. Lachgas-Emissionen aus der Schweizer Landwirtschaft. In: Herzog, F. und Richner, W. (Eds.): Evaluation der Ökomassnahmen im Bereich Stickstoff und Phosphor. Schriftenreihe der FAL 57: 64-67.

224. Herzog, F., Cornaz, S., Decrem, M., Leifeld, J., Menzi, H., Mural, R., Spiess, E., Richner, W., 2005. Wirkung der Ökomassnahmen auf die Stickstoffausträge aus der schweizerischen Landwirtschaft. In: Herzog, F. und Richner, W. (Eds.): Evaluation der Ökomassnahmen im Bereich Stickstoff und Phosphor. Schriftenreihe der FAL 57: 70-78.
225. Neftel, A., Ammann, C., Calanca, P., Flechard, C., Fuhrer, J., Leifeld, J., Jocher, M., 2005. Treibhausgasquellen und -senken: die "Kyoto-Wiese". Agrarforschung 12: 356-361.
226. Zimmermann, M., Leifeld, J., Schmidt, M.W.I., Fuhrer, J., 2004. Characterization of soil properties by DRIFT-spectroscopy. Proceedings CD of the International EUROSIL 2004-Conference, 04.-12. September 2004 in Freiburg.
227. Hagedorn, F., Leifeld, J., Körner, C., Ammann, C., Flechard, C., Neftel, A., Fuhrer, J., Keel, S.G., 2004. Carbon cycling in terrestrial ecosystems: CO₂-enrichment of forests and greenhouse gas fluxes in grassland systems. In: Stahr, K. and Fleck, W. (Eds.): Soils, landscapes and environmental problems. Eurosoil excursion guide book. Forstliche Versuchsanstalt Baden-Württemberg, 209-221.
228. Amman, C., Leifeld, J., Neftel, A., Fuhrer, J., 2004. Greenhouse Gas budget of intensively and extensively managed grasslands in Switzerland. Greenhouse Gas Emissions from Agriculture - Mitigation Options and Strategies. International Conference, 10th - 12th February 2004, Leipzig, 333-334.
229. Robert, M., Northcliff, S., Yli-Halla, M., Pallière, C., Baritz, R., Leifeld, J., Bannick, C.G., Chenu, C., 2004. Functions, roles and changes in soil organic matter. In: Van-Camp. L., Bujarrabal, B., Gentile, A-R., Jones, R.J.A., Montanarella, L., Olazabal, C. and Selvaradjou, S-K. Reports of the Technical Working Groups established under the Thematic Strategy for Soil Protection. EUR 21319 EN/3, 872 pp. Office for Official Publications of the European Communities, Luxembourg, pp. 313-327.
230. Jones, R.J.A., Yli-Halla, M., Demetriades, A., Leifeld, J., Robert, M., 2004. Status and distribution of soil organic matter in Europe. In: Van-Camp. L., Bujarrabal, B., Gentile, A-R., Jones, R.J.A., Montanarella, L., Olazabal, C. and Selvaradjou, S-K. Reports of the Technical Working Groups established under the Thematic Strategy for Soil Protection. EUR 21319 EN/3, 872 pp. Office for Official Publications of the European Communities, Luxembourg, pp. 329-352.
231. Andrén, O., Baritz, R., Brandaou, C., Breure, T., Feix, I., Franko, U., Gronlund, A., Leifeld, J., Maly, S., 2004. Soil biodiversity. In: Van-Camp. L., Bujarrabal, B., Gentile, A-R., Jones, R.J.A., Montanarella, L., Olazabal, C. and Selvaradjou, S-K. Reports of the Technical Working Groups established under the Thematic Strategy for Soil Protection. EUR 21319 EN/3, 872 pp. Office for Official Publications of the European Communities, Luxembourg, pp. 353-393.
232. Baritz, R., De Neve, S., Barancikova, G., Gronlund, A., Leifeld, J., Katzensteiner, K., Koch, H.-J., Palliere, C., Romanya, J., Schaminee, J., 2004. Land use practices and soil organic matter. In: Van-Camp. L., Bujarrabal, B., Gentile, A-R., Jones, R.J.A., Montanarella, L., Olazabal, C. and Selvaradjou, S-K. Reports of the Technical Working Groups established under the Thematic Strategy for Soil Protection. EUR 21319 EN/3, 872 pp. Office for Official Publications of the European Communities, Luxembourg, pp. 439-465.
233. Leifeld, J., Bassin, S., Fuhrer, J., 2003. Soil carbon stocks, sequestration potentials and soil carbon indicators in Swiss agriculture. In: Smith, C.A.S (Ed.) Soil organic carbon and agriculture: Developing indicators for policy analysis. Proceedings of an OECD expert meeting, Ottawa Canada. Agriculture and Agri-Food Canada, Ottawa and Organisation for Economic Co-operation and Development, Paris, pp. 181-192 pp.
234. Leifeld, J., Bassin, S., Fuhrer, J., 2003. Kohlenstoffvorräte- und Bindungspotentiale in landwirtschaftlichen Böden der Schweiz. Mitteilgn. Dtsch. Bodenkundl. Gesellsch. 102: 365-366.
235. Leifeld, J., Bassin, S., Fuhrer, J., 2003. Carbon stocks and carbon sequestration potentials in agricultural soils in Switzerland. Schriftenreihe der FAL 44, 120 pp.
236. Fischlin, A., Buchter, B., Matile, L., Ammon, K., Hepperle, E., Leifeld, J., Fuhrer, J., 2003. Bestandesaufnahme zum Thema Senken in der Schweiz. Systems Ecology Report No. 29, Institut für Terrestrische Ökologie, Eidgenössische Technische Hochschule Zürich (ETHZ), Schweiz: 86 pp.
237. Leifeld, J., Calanca, P., Fuhrer, J., 2001. Modellierung der Boden-C-Speicherung mit unterschiedlichen Temperaturfunktionen. Mitteilgn. Dtsch. Bodenkundl. Gesellsch. 96: 245-246.
238. Kölbl, A., Leifeld, J., Kögel-Knabner, I., 2001. Struktur und Funktion organischer Bodenfraktionen am Beispiel eines landwirtschaftlich genutzten Standorts. Mitteilgn. Dtsch. Bodenkundl. Gesellsch. 96: 227-228.

239. Siebert, S., Leifeld, J., Kögel-Knabner, I., 2000. Anwendung von Frisch- und Fertigkompost auf einen Re-kultivierungsboden. *Mitteilgn. Dtsch. Bodenkundl. Gesellsch.* 93: 335-338.
240. Leifeld, J., Siebert, S., Kögel-Knabner, I., 1999. Effects of biowaste compost amendment on soil microbial biomass and specific carbon turnover in agricultural soils. In: *Proceedings of the international conference on biological treatment of waste and the environment*. Weimar, Germany, 475-481.
241. Kedzia, M., Siebert, S., Leifeld, J., Kögel-Knabner, I., 1997. Einfluß unterschiedlicher Komposte auf die Bodenfruchtbarkeit einer Parabraunerde. *Mitteilgn. Dtsch. Bodenkundl. Gesellsch.* 85: 525-528.
242. Leifeld, J., 1997. Kommunale Kompostierung. Anwendungsorientierte, verfahrenstechnische und kreislauf-wirtschaftliche Aspekte. Edition Wissenschaft, Reihe Agrarwissenschaften, Bd. 4, Tectum Verlag Marburg, 73 pp.
243. Leifeld, J., Siebert, S., Kögel-Knabner, I., 1997. Veränderungen in der chemischen Struktur organischer Substanz durch Kompostanwendung im Modellversuch. *Mitteilgn. Dtsch. Bodenkundl. Gesellsch.* 85: 545-548.
244. Leifeld, J., Siebert, S., Kögel-Knabner, I., 1997. Einfluß unterschiedlicher Düngungsvarianten auf organi-sche Stoffgruppen in Böden. *Mitteilgn. Dtsch. Bodenkundl. Gesellsch.* 83: 347-350.
245. Siebert, S., Leifeld, J., Kögel-Knabner, I., 1997. Mineralisierungsprozesse bei der Anwendung von Bioab-fallkomposten auf Böden. *Mitteilgn. Dtsch. Bodenkundl. Gesellsch.* 83: 383-386.
246. Kögel-Knabner, I., Siebert, S., Leifeld, J., 1996. Humifizierungsprozesse von Kompost nach der Ausbrin-gung auf den Boden. In: Stegmann, R. (Hrsg.): *Neue Techniken zur Kompostierung*. Hamburger Berichte 11, Economica Verlag Hamburg, 73-87.
247. Leifeld, J., Kögel-Knabner, I., 1996. Einfluss der Anwendung von Bioabfallkomposten auf die Kohlenstoff- und Stickstofffraktionen in Böden. Teil 2: Kohlenstofffraktionen. *VDLUFA-Schriftenreihe 108, Kongress-band 1996 Trier*, 429-432.
248. Leifeld, J., Rohde, D., Held, T., 1996. Untersuchungen zur Grünabfallkompostierung in der Stadt Witten. *Wasser und Boden 48*: 17-23.
249. Siebert, S., Leifeld, J., Kögel-Knabner, I., 1996. A microcosm system to determine the gas production of arable soils amended with different composts. In: De Bertoldi, M., P. Sequi, B. Lemmes and T. Papi (Eds.): *The science of composting*. Blackie Academic and Professional, Glasgow, 1335-1338.
250. Leifeld, J., Siebert, S., Kögel-Knabner, I., 1995. Konstruktion einer Versuchsanlage zur Untersuchung der Freisetzung von Spurengasen aus Boden-Kompostsubstraten. *Mitteilgn. Dtsch. Bodenkundl. Gesellsch.* 76: 661-664.
251. Leifeld, J., 1995. Bioabfall und Grüne Tonne. In: *Bildungszentrum für die Entsorgungs- und Wasserwirt-schaft GmbH BEW Essen, Fortbildung Abfallwirtschaftsberatung*, 6 pp.
252. Leifeld, J., 1995. Systeme zur Erfassung der Biotonne. In: *Bildungszentrum für die Entsorgungs- und Was-serwirtschaft GmbH BEW Essen, Fortbildung Abfallwirtschaftsberatung*, 8 pp.
253. Leifeld, J., 1995. Einführung der Biotonne. In: *Bildungszentrum für die Entsorgungs- und Wasserwirtschaft GmbH BEW Essen, Fortbildung Abfallwirtschaftsberatung*, 6 pp.
254. Leifeld, J., 1995. Bioabfälle aus Kantinen und Großküchen. In: *Bildungszentrum für die Entsorgungs- und Wasserwirtschaft GmbH BEW Essen, Fortbildung Abfallwirtschaftsberatung*, 7 pp.
255. Held, T., Leifeld, J., 1994. Ökonomische und ökologische Vorteile der kommunalen Grünabfallkompostie-rung. *Der Städtetag 10*: 700-703.

Scientific and Project Reports, Working Papers

256. Paul, S.M., Alewell, C., Leifeld, J., 2023. Climate relevance of organic soils: GHG balance of soil coverages and climate policy assessment. Final report to the Swiss Office for the Environment, contract number BAFU 16.0152.PJ / Q062-0784 and 16.0152.PJ / BAFU-D-BF3A3401/781, Agroscope, 31 pp.
257. Swiss Agency for the Environment, Forests and Landscape FOEN 2013. Switzerland's Greenhouse Gas In-ventory 1990–2011. National Inventory Report 2013. FOEN 2013, Bern, 486 pp.
258. Leifeld, J., 2012. Turnover and stabilization of soil organic matter in high elevation grasslands. Final report to the State Secretariat for Education and Research, 4 pp.

259. Meyer, S., Leifeld, J., Fuhrer, J., 2012. The effect of grassland abandonment on organic carbon and nitrogen in subalpine soils. Final report to the Swiss Federal Agency for the Environment, contract number 09.0015.KP/I175-0721, 8 pp.
260. Swiss Agency for the Environment, Forests and Landscape FOEN 2011. Switzerland's Greenhouse Gas Inventory 1990–2009. National Inventory Report 2011. FOEN 2011, Bern, 468 pp.
261. Leifeld, J., Budge, K., 2010. Labile carbon in soils of alpine grasslands. Final report to the Swiss National Science Foundation, contract number 200021-115891, 7 pp.
262. Swiss Agency for the Environment, Forests and Landscape FOEN 2010. Switzerland's Greenhouse Gas Inventory 1990–2008. National Inventory Report 2010. FOEN 2010, Bern, 417 pp.
263. Swiss Agency for the Environment, Forests and Landscape FOEN 2009. Switzerland's Greenhouse Gas Inventory 1990–2007. National Inventory Report 2009. FOEN 2009, Bern, 364 pp.
264. Bretscher, D., Leifeld, J., 2008. Uncertainty of agricultural CH₄ and N₂O emissions in Switzerland. Report to the Swiss Federal Office for the Environment. Zurich, 22 pp.
265. Leifeld, J., Zimmermann, M., Fuhrer, J., 2006. Characterization of soil carbon stocks and site-specific sequestration potentials of agricultural soils. Final report to the Swiss Federal Office for the Environment, contract number 810.03.0716/2003.C4, 28 pp.
266. Swiss Agency for the Environment, Forests and Landscape FOEN 2005. Switzerland's fourth national communication under the UNFCCC. FOEN 2005, Bern, 238 pp.
267. Swiss Agency for the Environment, Forests and Landscape FOEN 2005. Switzerland's report on demonstrable progress in line with Decisions 22/CP.7 and 25/CP.8 of the UNFCCC. FOEN 2005, Bern, 54 pp.
268. Leifeld, J., Kölbl, A., Kögel-Knabner, I., 2001. Isolierung und Charakterisierung der C- und N-Pools. FAM-Bericht, 48, 65-71.
269. Leifeld, J., Kögel-Knabner, I., Auerswald, K., 2000. Isolierung und Charakterisierung der C- und N-Pools. FAM-Bericht, 39, 41-45.
270. Leifeld, J., Kögel-Knabner, I., Auerswald, K., 1999. C-N Pools in Böden. In: v. Lützw, M. und Munch, J.C. (Hrsg): Forschungsverbund Agrarökosysteme München FAM, Jahresbericht 1998, GSF-Forschungszentrum, 113-117.
271. Kögel-Knabner I., Leifeld, J., Siebert, S., 1998. Neue Techniken der Kompostierung: Verwertung auf landwirtschaftlichen Flächen. Humifizierungsprozesse von Kompost nach der Ausbringung auf den Boden Reihe BMBF-Projektträgerschaft, Umweltbundesamt, Berlin, 174 pp.
272. Leifeld J., Siebert, S., Kögel-Knabner, I., 1996. Humifizierungsprozesse von Kompost nach der Ausbringung auf den Boden, TV 12. BMBF-Verbundvorhaben "Neue Techniken zur Kompostierung" Kompendium, Umweltbundesamt PT AWAS (Hrsg.), 101-108.

Monographs

273. Leifeld, J., 2007. Soil organic matter and environmental change. Habilitationsschrift, Basel, 121 pp.
274. Leifeld, J., 1998. Einfluß von Kompostanwendung auf den Umsatz der organischen Substanz in Böden. Ergebnisse aus Modell- und Feldversuchen. Dissertation, Fakultät für Geowissenschaften, Ruhr-Universität Bochum und Shaker Verlag Aachen, 115 pp.
275. Leifeld, J., 1994. Kommunale Kompostierung. Diplomarbeit, Fakultät für Geowissenschaften, Ruhr-Universität Bochum und Edition Wissenschaft, Reihe Agrarwissenschaften, Bd. 4, Tectum Verlag Marburg, 73 pp.