CV - Yafei Li, PhD

Agroscope, Agroecology and Environment Division
Nationality: Chinese
English (Fluent); Chinese (Native)
yafei.li@agroscope.admin.ch; l.yafei@outlook.com | +41 779908631

Employment

11.2025 – now	Research Associate, Agroscope, Soil Quality and Soil Use Group
06.2024 – 10.2025	Postdoc, Agroscope, Soil Quality and Soil Use Group
08.2022 – 05.2024	Postdoc, Agroscope, Agricultural Landscape and Biodiversity Group
03.2018 – 04.2022	Scientific Assistant / PhD Student, ETH Zurich, Grassland Sciences Group
07.2017 – 02.2018	Research Assistant, Chinese Academy of Sciences, Ecohydrology Group
07.2013 – 12.2013	Intern, Pearl River Water Resources Commission, China
08.2013 – 09.2013	Intern, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences

Education

03.2018 – 12.2021	PhD, ETH Zurich, Dew & Fog Processes in Temperate Grasslands
08.2014 – 12.2016	MSc, University of Copenhagen, Water & Environment
08.2014 – 06.2017	MSc, University of Chinese Academy of Sciences, Environmental Sciences
09.2010 – 06.2014	BSc, Sun Yat-sen University, Environmental Management

Teaching & Supervision

2023	Master supervision, Rutger Jager, Environmental Management, VU Amsterdam
2022	Tutor for Master and Doctoral Course "Stable Isotope Ecology", ETH Zurich
2018 – 2021	Advisor of student helpers / apprentices, Grassland Sciences Group, ETH Zurich
2017 – 2018	Group advisor for water quality analysis, Chinese Academy of Sciences

Research Interests

Water–Heat–Carbon Coupling and Nature-based Solutions for Climate Adaptation and Carbon Neutrality in Terrestrial Ecosystems

- Role of dew and fog in ecosystem water and carbon budgets and climate adaptation
- Ecosystem water-use strategies and resilience under environmental stress
- Process-based modeling of soil organic carbon dynamics under agricultural management
- Sustainable agricultural management: technology adoption, agroforestry, and socio-economic drivers of climate-smart practices

Projects

2024-2027 Federal Office for Agriculture Switzerland FOAG. Methodological Development of Humus Balance Calculator. Scientific Lead

2022-2024 Swiss National Science Foundation. What is Sustainable Intensification? Operationalizing Sustainable Agricultural Intensification Pathways in Europe (SIPATH). Scientific Lead of the Work

Package on Technology Adoption

2018-2022 Swiss National Science Foundation. The Importance of Fog and Dew for Swiss Grasslands Today and in the Future (IFDewS). Scientific Lead

2014-2017 National Natural Science Foundation of China. Water Sources and Hydrological Responses of Typical Plants in Ejina Delta, China. Scientific Lead

Conference organization

Session Convener: Soil carbon flux for climate and soil health. World Congress of Soil Science 2026. Nanjing, China. 7 – 12 June 2026.

Peer Reviewer

Agricultural and Forest Meteorology; Journal of Hydrology; Agricultural Systems; Agronomy for Sustainable Development; Soil & Tillage Research; European Journal of Soil Science; Hydrological Processes; Scientific Reports

Thesis

PhD thesis: Effect of dew and fog on Swiss grasslands using stable isotopes of water. 2021. ETH Zurich. Supervisors: Prof. Dr. Werner Eugster, Prof. Dr. Nina Buchmann, Prof. Dr. Franziska Aemisegger.

Master thesis: The Responses of winter wheat to transgenerational exposure in elevated [CO_2] environment combined with drought stress. 2016. University of Copenhagen. Supervisor: Prof. Dr. Fulai Liu

Master thesis: Water source dividing of *Populus euphratica* and *Tamarix ramosissima* in the riparian zones in Ejina Delta, the lower reaches of Heihe River Basin. 2017. University of Chinese Academy of Sciences. Supervisor: Prof. Dr. Jingjie Yu

Publications

[1]. den Hond-Vaccaro C, Jarosch K, Kay S, **Li Y**, Herzog F (2026) Experts expect European agroforestry systems to stabilize crop yields under climate change. *Agronomy for Sustainable Development*. (accepted)

[2]. Levers C, Helfenstein J, Bürgi M, Debonne N, Diogo V, Dossche R, Herzog F, **Li Y**, Mohr F, Swart R, Williams TG, Verburg PH (2026). Conceptualising and mapping polarisation trends in land systems. *Ambio*, 1-18.

[3]. **Li Y**#, Riedl A#, Buchmann N, Eugster W (2026) Magnitude and impacts of non-rainfall water inputs and nocturnal evapotranspiration on temperate grassland ecosystems. *Journal of Hydrology*. 134632 (# equal contribution)

[4]. **Li Y**, Ammann J, Helfenstein J, Williams TG, Levers C, Mohr F, Diogo V, Zafeiriou R, Rolo V, Beckmann M, Hernik J, Kizos T, Herzog F (2026) The potential of variable-rate technology for sustainable intensification of European arable farming. *European Journal of Agronomy*. 172, 127868.

[5]. **Li Y**, Helfenstein J, Swart R, Levers C, Mohr F, Diogo V, Bürgi M, Williams TG, Zafeiriou R, Zarina A, Ammann J, Rolo V, Verburg PH, Beckmann M, Hernik J, Kizos T, Herzog F (2025) Agroecological

and technological practices in European arable farming: Past uptake and expert visions for future development. *Land Use Policy*. 153, 107553.

[6]. **Li Y**, Herzog F, Levers C, Mohr F, Verburg PH, Bürgi M, Dossche R, Williams TG (2024) Agricultural technology as a pathway of sustainable intensification: insights from the development, diffusion and impact of patents. *Agronomy for Sustainable Development*. 44, 14.

[7]. **Li Y**, Eugster W, Riedl A, Westerhuis S, Buchmann N, Aemisegger F (2023) Identifying key stages of radiation fog evolution using water vapor isotopes. *Agricultural and Forest Meteorology*. 334, 109430.

[8]. **Li Y**, Eugster W, Riedl A, Lehmann MM, Aemisegger F, Buchmann N (2023) Dew benefits on alpine grasslands are cancelled out by combined heatwave and drought stress. *Frontiers in Plant Science*. 14, 1136037.

[9]. **Li Y**, Riedl A, Eugster W, Buchmann N, Cernusak LA, Lehmann MM, Werner RA, Aemisegger F (2023) The role of radiative cooling and leaf wetting in air–leaf water exchange during dew and radiation fog events in a temperate grassland. *Agricultural and Forest Meteorology*. 328, 109256.

[10].Riedl A, **Li Y**, Eugster J, Buchmann N, Eugster W (2022) Technical note: High accuracy weighing micro-lysimeter system for long-term measurements of non-rainfall water inputs to grasslands. *Hydrology and Earth System Sciences*. 26(1): 91-116.

[11].**Li Y**, Aemisegger F, Riedl A, Buchmann N, Eugster W (2021) The role of dew and radiation fog inputs in the local water cycling of a temperate grassland during dry spells in central Europe. *Hydrology and Earth System Sciences*. 25, 2617-2648.

[12].Li X., **Li Y**, Zhu X, Liu S, Liu F (2019) Modulation of photosynthate supply by CO2 elevation affects the post-head-emergence frost-induced grain yield loss in wheat. *Journal of Agronomy and Crop Science*. 205, 54-64.

[13].**Li Y#**, Li X#, Yu J, Liu F (2017) Effect of the transgenerational exposure to elevated CO2 on the drought response of winter wheat: Stomatal control and water use efficiency. *Environmental and Experimental Botany*. 136, 78-84. (# equal contribution)

[14].Yu J., **Li Y.** (2018) Uncertainties in the usage of stable hydrogen and oxygen isotopes for the quantification of plant water sources (in Chinese with English abstract). *Acta Ecologica Sinica*. 38, 7942-7949.

[15].**Li Y**, Yu J, Lu K, Wang P, Zhang Y, Du C (2017) Water sources of *Populus euphratica* and *Tamarix ramosissima* in Ejina Delta, the lower reaches of the Heihe River, China (in Chinese with English abstract). *Chinese Journal of Plant Ecology*. 41, 519-528.

Conference Contribution

[1]. (Oral) A model-based tool for supporting sustainable management of soil organic carbon in Swiss croplands, Nanjing, China, 7–12 June 2026.

[2]. (Poster) Developing a Soil Organic Matter Management Tool for Swiss Farmers. European Geosciences Union General Assembly, Vienna, Austria, 27 April–2 May 2025.

[3]. (Invited speaker) How Can Agri-Tech Support Sustainable Agriculture? Insights from Patent

Reviews and Farm Surveys. 35th Meeting of the OECD's Farm Level Analysis Network (FLAN), Paris, France, 12-13 June 2025.

[4]. (Oral) Agricultural technology as the pathway towards sustainable intensification of European farming landscapes. 11th IALE World Congress. Nairobi, Kenya, 10–15 July 2023.

[5]. (Invited speaker) Sustainable intensification in European agriculture. Seminar: Current Topics in Grassland Sciences". ETH Zurich. 24 April 2023.

[6]. (Oral) The role of dew and radiation fog inputs in the local water cycling of a temperate grassland during dry spells in central Europe. European Geosciences Union General Assembly, Vienna, Austria, 23–27 May 2022.

[7]. (Invited speaker) The role of dew and fog in local water cycle using stable isotopes of water. Biogeochemical Processes Department Seminar, Max Planck Institute for Biogeochemistry. 3 Feb 2022.

[8]. (Poster) The role of dew and radiation fog inputs in the local water cycling of a temperate grassland during dry spells in central Europe. Workshop – «Water isotopes: From Weather to Climate », hybrid workshop, 15–17 November 2021.

[9]. (Poster) Tracing dew and fog water inputs into temperate grassland using stable water isotopes in the extreme summer 2018. European Geosciences Union General Assembly, Online, 4–8 May 2020.

[10].(Oral) Effect of Dew and Fog Water on Swiss Grasslands Using Stable Water Isotopes. the 17th Swiss Geoscience Meeting, Fribourg, Switzerland, 22–23 Nov 2019.

[11].(Oral) Effect of dew and fog water on Swiss grassland with stable water isotopes - a case study in 2018 extreme summer drought. The 8th International Fog and Dew Association Conference, Taipei, China, 14–19 July 2019.

[12].(Poster) Quantifying the effect of dew and fog water on Swiss grasslands with stable water isotopes. European Geosciences Union General Assembly, Vienna, Austria, 7–12 April 2019.

[13].(Poster) Quantifying the importance of dew on Swiss grasslands with stable water isotope. The 16th Swiss Geoscience Meeting, Bern, Switzerland, 30 Nov – 1 Dec 2018.

Honors & Awards

2018 PhD scholarship funded by Swiss National Science Foundation

2018 Exemption from ETH Zurich doctoral qualifying examination

2015 Outstanding Student Leader, University of Chinese Academy of Sciences

2015 Outstanding Student, University of Chinese Academy of Sciences

2014 Outstanding Undergraduate Intern Scholarship, Chinese Academy of Sciences

2013 Exemption for Postgraduate Entrance Examination, Sun Yat-sen University

2011/2013 Chinese National Encouragement Scholarship, Sun Yat-sen University

2011/2012/2013 Outstanding Student Scholarship, Sun Yat-sen University

2012 China Southern Airlines Stipend, Sun Yat-sen University

2011 Outstanding Newspaper Editor, Sun Yat-sen University