

## Dr. Yafei Li postdoc at Agroscope, Switzerland

Born on 20 July 1990 in North China Plain

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**Email:** l.yafei@outlook.com (permanent) | yafei.li@agroscope.admin.ch (until May 2024)

### Education

03.2018–03.2022 **PhD, ETH Zurich, Switzerland**

**Thesis:** Effect of dew and fog on Swiss grasslands using stable isotopes of water.

Supervised by Prof. Dr. Werner Eugster (passed away in May 2022),

Prof. Dr. Nina Buchmann, Dr. Franziska Aemisegger

08.2014–12.2016 **MSc, University of Chinese Academy of Sciences, China**

**Thesis:** Water source dividing of *Populus euphratica* and *Tamarix ramosissima* in the riparian zones in Ejina Delta, the lower reaches of Heihe River Basin

Supervised by Prof. Dr. Jingjie Yu

08.2014–06.2017 **MSc, University of Copenhagen, Denmark**

**Thesis:** The Responses of winter wheat to transgenerational exposure in elevated [CO<sub>2</sub>] environment combined with drought stress

Supervised by Prof. Dr. Fulai Liu

09.2010–07.2014 **BSc, Resources Environment & Urban and Rural Planning Management, Sun Yat-sen University, China**

**Thesis:** The influence of climate change on the HUII medicine growth and production

Supervised by Prof. Dr. Zhen Tao

### Employment & internship

08.2022–now **Postdoc**, Agroscope, Switzerland

03.2018–04.2022 **Scientific assistant (PhD)**, Institute of Agricultural Sciences, ETH Zurich

07.2017–02.2018 **Research assistant**, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences

08.2013–09.2013 **Intern**, Pearl River Water Resources Commission of the Ministry of Water Resources, China

07.2013–12.2013 **Intern**, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences

### Research interests

Dew & fog processes, atmospheric dynamics, water cycle, hydrology, stable isotopes, ecohydrology, land-atmosphere interaction, water-carbon relations, eddy covariance, sustainable agriculture

## Projects

- 2022-2024 **Postdoc:** Swiss National Science Foundation – What is Sustainable Intensification? Operationalizing Sustainable Agricultural Intensification Pathways in Europe (SIPATH); employee
- 2018–2022 **Doctorate:** Swiss National Science Foundation –The importance of fog and dew for Swiss grasslands today and in the future (IFDewS); employee
- 2014–2017 **Master:** National Natural Science Foundation of China – Water sources and hydrological responses of typical plants in Ejina Delta, China; participant

## Teaching and supervision

- 2023 **1<sup>st</sup> supervisor** of master student Rutger Jager at VU Amsterdam
- 01.2022 **Tutor** for Master and Doctoral Course "Stable Isotope Ecology",  
ETH Zurich
- 07.2018–07.2021 **Advisor** of student helpers and apprentices, Grassland Sciences group,  
ETH Zurich
- 07.2017 – 02.2018 **Advisor** for the analysis of water quality and stable isotopes,  
Institute of Geographic Sciences and Natural Resources Research, Chinese  
Academy of Sciences

## Publications

- [1]. Li Y., Herzog F., Levers C., Mohr F., Verburg P.H., Bürgi M., Dossche R., Williams T.G. (2024) Agricultural technology as a pathway of sustainable intensification: insights from the development, diffusion and impact of patents. *Agronomy for Sustainable Development*. 44, 14.
- [2]. 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.
- [3]. Li Y., Eugster W., Riedl A., Lehmann M.M., 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.
- [4]. Li Y., Riedl A., Eugster W., Buchmann N., Cernusak L.A., Lehmann M.M., Werner R.A., 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.
- [5]. 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.
- [6]. 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.

- [7]. Li X., Li Y., Zhu X., Liu S., Liu F. (2019) Modulation of photosynthate supply by CO<sub>2</sub> elevation affects the post-head-emergence frost-induced grain yield loss in wheat. Journal of Agronomy and Crop Science. 205, 54-64.
- [8]. Yu J., Li Y. (2018) Uncertainties in the usage of stable hydrogen and oxygen isotopes for the quantification of plant water sources. Acta Ecologica Sinica (in Chinese with English abstract). 38, 7942-7949.
- [9]. Li Y., Li X., Yu J., Liu F. (2017) Effect of the transgenerational exposure to elevated CO<sub>2</sub> on the drought response of winter wheat: Stomatal control and water use efficiency. Environmental and Experimental Botany. 136, 78-84.
- [10]. 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. Chinese Journal of Plant Ecology (in Chinese with English abstract). 41, 519-528.
- [11]. Lu K., Yu J., Wang P., Li Y., Li B. (2017) The response of plant water use strategy to hydrological conditions in arid areas: A case study of *Populus euphratica* in Ejina Delta. South-to-North Water Transfers and Water Science & Technology (in Chinese with English abstract). 15(1): 88-94.
- [12]. Ren A., Li Y., Tao Z., Zhang Q., Xu P., Yang B. (2016) The influence of climate change on the Huai medicine growth and production. Acta Scientiarum Naturalium Universitatis Sunyatseni (in Chinese with English abstract). 55(5): 119-126.

#### *Submitted*

- [1]. Li Y., Ammann J., Helfenstein J., Williams T.G., Levers C., Mohr F., Diogo V., Zafeiriou R., Romero V.R., Beckmann M., Hernik J., Kizos T., Herzog F. (2023) The potential of variable-rate technology for sustainable intensification of European arable farming. Agronomy for Sustainable Development.

#### **Reviewer of**

Agricultural and Forest Meteorology  
Journal of Hydrology

#### **Conference contributions**

- [1]. Li Y., Herzog F. (2023). Agricultural technology as the pathway towards sustainable intensification of European farming landscapes. 11<sup>th</sup> IALE World Congress. Nairobi, Kenya, 10–15 July 2023. (oral)
- [2]. Li Y., Aemisegger F., Riedl A., Buchmann N., Eugster W. (2022): 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. (oral)
- [3]. 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. Workshop – «Water isotopes: From Weather to Climate », hybrid workshop, 15–17 November

2021. (poster)

- [4]. Li Y., Riedl A., Aemisegger F., Buchmann N., Eugster W. (2020): Tracing dew and fog water inputs into temperate grassland using stable water isotopes in the extreme summer 2018. European Geosciences Union General Assembly, Vienna, Austria, 4–8 May 2020. (poster)
- [5]. Li Y., Riedl A., Aemisegger F., Buchmann N., Eugster W. (2019): Effect of dew and fog water on Swiss grassland using stable water isotopes at Chamau study site - in summer 2018. the 17<sup>th</sup> Swiss Geoscience Meeting, Fribourg, Switzerland, 22–23 Nov 2019. (oral)
- [6]. Li Y., Riedl A., Aemisegger F., Buchmann N., Eugster W. (2019): Effect of dew and fog water on Swiss grassland with stable water isotopes - a case study in 2018 extreme summer drought. The 8<sup>th</sup> International Fog and Dew Association Conference, Taipei, China, 14–19 July 2019. (oral)
- [7]. Li Y., Riedl A., Aemisegger F., Buchmann N., Eugster W. (2019): 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. (poster)
- [8]. Li Y., Riedl A., Aemisegger F., Buchmann N., Eugster, W. (2018): Quantifying the importance of dew on Swiss grasslands with stable water isotope. The 16<sup>th</sup> Swiss Geoscience Meeting, 30 Nov – 1 Dec 2018. (poster)

## **Awards**

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|----------------|---|
| 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   |
| 2012           | China Southern Airlines Stipend, Sun Yat-sen University                   |
| 2013/2011      | Chinese National Encouragement Scholarship, Sun Yat-sen University        |
| 2013/2012/2011 | Outstanding Student Scholarship, Sun Yat-sen University                   |
| 2011           | Outstanding Newspaper Editor, Sun Yat-sen University                      |