

Curriculum Vitae

PERSONAL DETAILS:

Name: Xiuzi Ren.
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EDUCATION:

Time	Degree	Graduation GPA	University
Sep.2021-Jun.2024	MSc in Pratacultural Science	3.9 (Top 5%)	Northwest A&F University
Sep.2017-Jun.2021	BSc in Pratacultural Science	3.5 (Top 20%)	Northwest A&F University

RESEARCH EXPERIENCES:

- **The Effect of Fire on Soil Water Infiltration in Grassland in the Loess Plateau Area** **Oct.2022—present**
Exploring the changes in soil infiltration and key influencing factors in the short term after simulated burning of grasslands with different abandoned years in hilly and gully areas, providing a scientific basis for the restoration of the ecological environment in the region of China's Loess Plateau.
Field experiments: Simulating the collection of soil samples after burning; measure the infiltration rate of the soil; explore the infiltration behavior of soil, such as preferential flow and wetting peak using staining tracing method.
Interior experiments: Determining basic properties such as soil bulk density, organic matter, moisture content, and root biomass.
Data analysis: Planning to determine the impact of abandoned years and fire disturbance on grassland soil infiltration through data analysis, in order to provide the optimal years for the reasonable restoration of local grasslands.
- **Restoration of Grassland Improves Soil Infiltration Capacity in Water-Wind Erosion Crisscross Region of China's Loess Plateau** **Jul.2021-Jun.2023**
By measuring the basic properties, aggregate characteristics, and water infiltration performance of soil under different land use modes in the water and wind erosion crisscross area of the Loess Plateau, combined with analysis of variance, correlation analysis, and structural equation modeling, the main influencing factors of soil infiltration performance are revealed. Based on the characteristics of aeolian sand soil and arsenic sandstone, combined with their experience in composite improvement, the optimal proportion of the three types of soil for common composite mixing is explored, Provide theoretical basis for local ecological environment restoration and land use management strategies.
Data analysis: Analysis of variance; correlation analysis; structural equation modeling; box plot; Arc Gis mapping.

PUBLICATIONS:

- [1] **Xiuzi Ren**, Xiaohong Chai, Yuanyuan Qu, Yuanhui Xu, Farhat Ullah Khan, Junfeng Wang, Palixiati Geming, Weiwei Wang, Qi Zhang, Qinxuan Wu, Xuexuan Xu*, Feng Du. Restoration of Grassland Improves Soil Infiltration Capacity in Water-Wind Erosion Crisscross Region of China's Loess Plateau. *Land*. (IF = 3.9, 2022). 12: 1485. <https://doi.org/10.3390/land12081485>
- [2] Xiaohong Chai, Weiwei Wang, **Xiuzi Ren**, Junfeng Wang, Qi Zhang, Feng Du, Xuexuan Xu*. Dominant plant functional types differentially alter the abundance, composition of soil hydrophobic compounds and water repellency on the Chinese Loess Plateau. *Plant and Soil*. (Under review, IF = 4.9, 2022)

SKILLS:

Computer: Proficient in using software such as R; Origin; SPSS; Graphpad Prism; Matlab; Amos.
Data analysis methods: Analysis of variance; dimensionality reduction; correlation analysis; random forest analysis; regression and modeling.
Visual cartography: Regression map; box plot; heat map; radar map; Arc GIS basic geographic information mapping.