# Xiaodong Gao

## List of Publications by Year in descending order

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Version: 2024-02-01

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|---|---|---|---|
| 104 papers | 3,831 citations | 81900 39 h-index | 155660 55 g-index |
| 119 all docs | 119 docs citations | 119 times ranked | 2933 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Effects of rainfall intensity, underlying surface and slope gradient on soil infiltration under simulated rainfall experiments. Catena, 2013, 104, 93-102. | 5.0 | 153 |
| 2 | Temporal and spatial evolution of the standardized precipitation evapotranspiration index (SPEI) in the Loess Plateau under climate change from 2001 to 2050. Science of the Total Environment, 2017, 595, 191-200. | 8.0 | 142 |
| 3 | EFFECTS OF LAND USE ON SOIL MOISTURE VARIATIONS IN A SEMIâ€ARID CATCHMENT: IMPLICATIONS FOR LAND AND AGRICULTURAL WATER MANAGEMENT. Land Degradation and Development, 2014, 25, 163-172. | 3.9 | 125 |
| 4 | Soil moisture variability along transects over a well-developed gully in the Loess Plateau, China. Catena, 2011, 87, 357-367. | 5.0 | 107 |
| 5 | Soil Quality Indicators in Relation to Land Use and Topography in a Small Catchment on the Loess Plateau of China. Land Degradation and Development, 2015, 26, 54-61. | 3.9 | 106 |
| 6 | Identifying a suitable revegetation technique for soil restoration on water-limited and degraded land: Considering both deep soil moisture deficit and soil organic carbon sequestration. Geoderma, 2018, 319, 61-69. | 5.1 | 106 |
| 7 | Changes in vegetation condition in areas with different gradients (1980â€“2010) on the Loess Plateau, China. Environmental Earth Sciences, 2013, 68, 2427-2438. | 2.7 | 105 |
| 8 | Improving/maintaining water-use efficiency and yield of wheat by deficit irrigation: A global meta-analysis. Agricultural Water Management, 2020, 228, 105906. | 5.6 | 77 |
| 9 | Biosynthesis of rare hexoses using microorganisms and related enzymes. Beilstein Journal of Organic Chemistry, 2013, 9, 2434-2445. | 2.2 | 74 |
| 10 | Estimating spatial mean soil water contents of sloping jujube orchards using temporal stability. Agricultural Water Management, 2011, 102, 66-73. | 5.6 | 73 |
| 11 | Radiation interception and utilization by wheat/maize strip intercropping systems. Agricultural and Forest Meteorology, 2015, 204, 58-66. | 4.8 | 71 |
| 12 | Scale effect and spatially explicit drivers of interactions between ecosystem servicesâ€”A case study from the Loess Plateau. Science of the Total Environment, 2021, 785, 147389. | 8.0 | 70 |
| 13 | Drought variation trends in different subregions of the Chinese Loess Plateau over the past four decades. Agricultural Water Management, 2012, 115, 167-177. | 5.6 | 66 |
| 14 | Growth, yield, and nitrogen use in the wheat/maize intercropping system in an arid region of northwestern China. Field Crops Research, 2014, 167, 19-30. | 5.1 | 64 |
| 15 | Effects of large gullies on catchment-scale soil moisture spatial behaviors: A case study on the Loess Plateau of China. Geoderma, 2016, 261, 1-10. | 5.1 | 62 |
| 16 | Maizeâ€“Soybean Intercropping Interactions Above and Below Ground. Crop Science, 2014, 54, 914-922. | 1.8 | 61 |
| 17 | The dynamic effects of pastures and crop on runoff and sediments reduction at loess slopes under simulated rainfall conditions. Catena, 2014, 119, 1-7. | 5.0 | 59 |
| 18 | Development and evaluation of a physically based multiscalar drought index: The Standardized Moisture Anomaly Index. Journal of Geophysical Research D: Atmospheres, 2015, 120, 11,575. | 3.3 | 59 |

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|---|---|---|---|
| 19 | Variations of Soil Organic Carbon Following Land Use Change on Deepâ€Loess Hillsopes in China. Land Degradation and Development, 2017, 28, 1902-1912. | 3.9 | 58 |
| 20 | Actual ET modelling based on the Budyko framework and the sustainability of vegetation water use in the loess plateau. Science of the Total Environment, 2017, 579, 1550-1559. | 8.0 | 57 |
| 21 | Border row effects on light interception in wheat/maize strip intercropping systems. Field Crops Research, 2017, 214, 1-13. | 5.1 | 57 |
| 22 | Exotic shrub species (Caragana korshinskii) is more resistant to extreme natural drought than native species (Artemisia gmelinii) in a semiarid revegetated ecosystem. Agricultural and Forest Meteorology, 2018, 263, 207-216. | 4.8 | 57 |
| 23 | Soil water and root distribution of apple tree (Malus pumila Mill) stands in relation to stand age and rainwater collection and infiltration system (RWCI) in a hilly region of the Loess Plateau, China. Catena, 2018, 170, 324-334. | 5.0 | 57 |
| 24 | Changes of soil hydraulic properties under early-stage natural vegetation recovering on the Loess Plateau of China. Catena, 2014, 113, 386-391. | 5.0 | 56 |
| 25 | The impact of urbanization and aging on food security in developing countries: The view from Northwest China. Journal of Cleaner Production, 2021, 292, 126067. | 9.3 | 56 |
| 26 | Spatial distribution of soil moisture and fine roots in rain-fed apple orchards employing a Rainwater Collection and Infiltration (RWCI) system on the Loess Plateau of China. Agricultural Water Management, 2017, 184, 170-177. | 5.6 | 54 |
| 27 | Impact of climate change and irrigation technology advancement on agricultural water use in China. Climatic Change, 2010, 100, 797-805. | 3.6 | 53 |
| 28 | Estimation of spatial soil moisture averages in a large gully of the Loess Plateau of China through statistical and modeling solutions. Journal of Hydrology, 2013, 486, 466-478. | 5.4 | 52 |
| 29 | Simulated Study on Effects of Ground Managements on Soil Water and Available Nutrients in Jujube Orchards. Land Degradation and Development, 2016, 27, 35-42. | 3.9 | 52 |
| 30 | Soil water effects of agroforestry in rainfed jujube ( Ziziphus jujube Mill.) orchards on loess hillslopes in Northwest China. Agriculture, Ecosystems and Environment, 2017, 247, 343-351. | 5.3 | 52 |
| 31 | Extreme natural drought enhances interspecific facilitation in semiarid agroforestry systems. Agriculture, Ecosystems and Environment, 2018, 265, 444-453. | 5.3 | 52 |
| 32 | Effects of water limitation on yield advantage and water use in wheat (Triticum aestivum L.)/maize (Zea) Tj ETQq0 0 0 rgBT /Overlock 10 | 4.1 | 51 |
| 33 | Soil Water Content and Root Patterns in a Rainâ€fed Jujube Plantation across Stand Ages on the Loess Plateau of China. Land Degradation and Development, 2017, 28, 207-216. | 3.9 | 50 |
| 34 | Effects of water collection and mulching combinations on water infiltration and consumption in a semiarid rainfed orchard. Journal of Hydrology, 2018, 558, 432-441. | 5.4 | 49 |
| 35 | Seasonal water use patterns of rainfed jujube trees in stands of different ages under semiarid Plantations in China. Agriculture, Ecosystems and Environment, 2018, 265, 392-401. | 5.3 | 49 |
| 36 | Estimating the spatial means and variability of root-zone soil moisture in gullies using measurements from nearby uplands. Journal of Hydrology, 2013, 476, 28-41. | 5.4 | 43 |

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|---|---|---|---|
| 37 | Soil properties of apple orchards on China's Loess Plateau. Science of the Total Environment, 2020, 723, 138041. | 8.0 | 42 |
| 38 | Age- and climate- related water use patterns of apple trees on Chinaâ€™s Loess Plateau. Journal of Hydrology, 2020, 582, 124462. | 5.4 | 41 |
| 39 | Drought responses of profile plant-available water and fine-root distributions in apple (Malus pumila) Tj ETQq1 1 0.784314 rgBT /Over 137739. | 8.0 | 41 |
| 40 | Runoff and sediment yield under simulated rainfall on hillslopes in the Loess Plateau of China. Soil Research, 2013, 51, 50. | 1.1 | 39 |
| 41 | Assessing the spatial and temporal variation of the rainwater harvesting potential (1971-2010) on the Chinese Loess Plateau using the VIC model. Hydrological Processes, 2014, 28, 534-544. | 2.6 | 39 |
| 42 | Target areas for harmonizing the Grain for Green Programme in China's Loess Plateau. Land Degradation and Development, 2020, 31, 325-333. | 3.9 | 37 |
| 43 | The Effects of Longâ€term Fertiliser Applications on Soil Organic Carbon and Hydraulic Properties of a Loess Soil in China. Land Degradation and Development, 2016, 27, 60-67. | 3.9 | 36 |
| 44 | Effects of varied water regimes on root development and its relations with soil water under wheat/maize intercropping system. Plant and Soil, 2019, 439, 113-130. | 3.7 | 36 |
| 45 | Global synthesis of the impact of droughts on cropsâ€™ water-use efficiency (WUE): Towards both high WUE and productivity. Agricultural Systems, 2020, 177, 102723. | 6.1 | 34 |
| 46 | Coupling evapotranspiration partitioning with water migration to identify the water consumption characteristics of wheat and maize in an intercropping system. Agricultural and Forest Meteorology, 2020, 290, 108034. | 4.8 | 34 |
| 47 | Yield, yield attributes and photosynthetic physiological characteristics of dryland wheat (Triticum) Tj ETQq1 1 0.784314 rgBT /Overlo | 5.1 | 33 |
| 48 | The spatial and temporal evolution of the actual evapotranspiration based on the remote sensing method in the Loess Plateau. Science of the Total Environment, 2020, 708, 135111. | 8.0 | 33 |
| 49 | Spatiotemporal analysis of climate variability (1971â€“2010) in spring and summer on the Loess Plateau, China. Hydrological Processes, 2014, 28, 1689-1702. | 2.6 | 32 |
| 50 | Runoff features of pasture and crop slopes at different rainfall intensities, antecedent moisture contents and gradients on the Chinese Loess Plateau: A solution of rainfall simulation experiments. Catena, 2014, 119, 90-96. | 5.0 | 31 |
| 51 | Dynamics of runoff and sediment trapping performance of vegetative filter strips: Run-on experiments and modeling. Science of the Total Environment, 2017, 593-594, 54-64. | 8.0 | 31 |
| 52 | Quantification and spatially explicit driving forces of the incoordination between ecosystem service supply and social demand at a regional scale. Ecological Indicators, 2022, 137, 108764. | 6.3 | 30 |
| 53 | New problems of food security in Northwest China: A sustainability perspective. Land Degradation and Development, 2020, 31, 975-989. | 3.9 | 28 |
| 54 | The economicâ€“environmental trade-off of growing apple trees in the drylands of China: A conceptual framework for sustainable intensification. Journal of Cleaner Production, 2021, 296, 126497. | 9.3 | 28 |

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|---|---|---|---|
| 55 | Effects of permanent ground cover on soil moisture in jujube orchards under sloping ground: A simulation study. Agricultural Water Management, 2014, 138, 68-77. | 5.6 | 27 |
| 56 | Effects of vegetation cover of natural grassland on runoff and sediment yield in loess hilly region of China. Journal of the Science of Food and Agriculture, 2014, 94, 497-503. | 3.5 | 26 |
| 57 | Water use and crop coefficient of the wheatâ€“maize strip intercropping system for an arid region in northwestern China. Agricultural Water Management, 2015, 161, 77-85. | 5.6 | 26 |
| 58 | Effect of natural factors and management practices on agricultural water use efficiency under drought: A meta-analysis of global drylands. Journal of Hydrology, 2021, 594, 125977. | 5.4 | 26 |
| 59 | Subsurface irrigation with ceramic emitters: An effective method to improve apple yield and irrigation water use efficiency in the semiarid Loess Plateau. Agriculture, Ecosystems and Environment, 2021, 313, 107404. | 5.3 | 26 |
| 60 | A drought hazard assessment index based on the VICâ€“PDSI model and its application on the Loess Plateau, China. Theoretical and Applied Climatology, 2013, 114, 125-138. | 2.8 | 25 |
| 61 | Simulation Study of the Impact of Permanent Groundcover on Soil and Water Changes in Jujube Orchards on Sloping Ground. Land Degradation and Development, 2016, 27, 946-954. | 3.9 | 25 |
| 62 | Catchment-scale variability of absolute versus temporal anomaly soil moisture: Time-invariant part not always plays the leading role. Journal of Hydrology, 2015, 529, 1669-1678. | 5.4 | 23 |
| 63 | Integrating a mini catchment with mulching for soil water management in a sloping jujube orchard on the semiarid Loess Plateau of China. Solid Earth, 2016, 7, 167-175. | 2.8 | 23 |
| 64 | Meteorological drought over the Chinese Loess Plateau: 1971â€“2010. Natural Hazards, 2013, 67, 951-961. | 3.4 | 21 |
| 65 | Recovery growth and water use of intercropped maize following wheat harvest in wheat/maize relay strip intercropping. Field Crops Research, 2020, 256, 107924. | 5.1 | 21 |
| 66 | Attribution analysis of climatic and multiple anthropogenic causes of runoff change in the Loess Plateauâ€”A caseâ€study of the Jing River Basin. Land Degradation and Development, 2020, 31, 1622-1640. | 3.9 | 21 |
| 67 | Impact of conservation practices on soil hydrothermal properties and crop water use efficiency in a dry agricultural region of the tibetan plateau. Soil and Tillage Research, 2020, 200, 104619. | 5.6 | 20 |
| 68 | Quantifying the importance of deep root water uptake for apple treesâ€™ hydrological and physiological performance in drylands. Journal of Hydrology, 2022, 606, 127471. | 5.4 | 20 |
| 69 | Effect of the fodder species canola (Brassica napus L.) and daylily (Hemerocallis fulva L.) on soil physical properties and soil water content in a rainfed orchard on the semiarid Loess Plateau, China. Plant and Soil, 2020, 453, 209-228. | 3.7 | 19 |
| 70 | Rainwater collection and infiltration (RWCI) systems promote deep soil water and organic carbon restoration in water-limited sloping orchards. Agricultural Water Management, 2020, 242, 106400. | 5.6 | 19 |
| 71 | The tradeoff between soil erosion protection and water consumption in revegetation: Evaluation of new indicators and influencing factors. Geoderma, 2019, 347, 32-39. | 5.1 | 18 |
| 72 | Seasonal effects of intercropping on tree water use strategies in semiarid plantations: Evidence from natural and labelling stable isotopes. Plant and Soil, 2020, 453, 229-243. | 3.7 | 18 |

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|---|---|---|---|
| 73 | Effects of soil managements on surface runoff and soil water content in jujube orchard under simulated rainfalls. Catena, 2015, 135, 193-201. | 5.0 | 17 |
| 74 | Statistical analyses and controls of root-zone soil moisture in a large gully of the Loess Plateau. Environmental Earth Sciences, 2014, 71, 4801-4809. | 2.7 | 16 |
| 75 | Effect of plant cover type on soil water budget and tree photosynthesis in jujube orchards. Agricultural Water Management, 2017, 184, 135-144. | 5.6 | 15 |
| 76 | Testing of observation operators designed to estimate profile soil moisture from surface measurements. Hydrological Processes, 2019, 33, 575-584. | 2.6 | 15 |
| 77 | Estimating soil moisture in gullies from adjacent upland measurements through different observation operators. Journal of Hydrology, 2013, 486, 420-429. | 5.4 | 14 |
| 78 | Application Rate Influences the Soil and Water Conservation Effectiveness of Mulching with Chipped Branches. Soil Science Society of America Journal, 2018, 82, 447-454. | 2.2 | 12 |
| 79 | Impact of land management practices on water use strategy for a dryland tree plantation and subsequent responses to drought. Land Degradation and Development, 2021, 32, 439-452. | 3.9 | 12 |
| 80 | Measurements and modeling of hydrological responses to summer pruning in dryland apple orchards. Journal of Hydrology, 2021, 594, 125651. | 5.4 | 12 |
| 81 | Changes in key driving forces of soil erosion in the Middle Yellow River Basin: vegetation and climate. Natural Hazards, 2014, 70, 957-968. | 3.4 | 11 |
| 82 | Land Use Affects Soil Moisture Response to Dramatic Shortâ€term Rainfall Events in a Hillslope Catchment of the Chinese Loess Plateau. Agronomy Journal, 2019, 111, 1506-1515. | 1.8 | 11 |
| 83 | Water-use patterns of Chinese wolfberry (Lycium barbarum L.) on the Tibetan Plateau. Agricultural Water Management, 2021, 255, 107010. | 5.6 | 11 |
| 84 | A new solution of high-efficiency rainwater irrigation mode for water management in apple plantation: Design and application. Agricultural Water Management, 2022, 259, 107243. | 5.6 | 10 |
| 85 | Revegetation modifies patterns of temporal soil respiration responses to extreme-drying-and-rewetting in a semiarid ecosystem. Plant and Soil, 2018, 433, 227-241. | 3.7 | 9 |
| 86 | Ecohydrological advantage of young apple tree-based agroforestry and its response to extreme droughts on the semiarid Loess Plateau. Agricultural and Forest Meteorology, 2022, 321, 108969. | 4.8 | 9 |
| 87 | Mulching Measures Improve Soil Moisture in Rain-Fed Jujube (Ziziphus jujuba Mill.) Orchards in the Loess Hilly Region of China. Sustainability, 2021, 13, 610. | 3.2 | 8 |
| 88 | Study on Water Suitability of Apple Plantations in the Loess Plateau under Climate Change. International Journal of Environmental Research and Public Health, 2018, 15, 2504. | 2.6 | 7 |
| 89 | Vegetative filter stripsâ€"Effect of vegetation type and shape of strip on runâ€off and sediment trapping. Land Degradation and Development, 2018, 29, 3917-3927. | 3.9 | 7 |
| 90 | Intra-storm time stability analysis of surface soil water content. Geoderma, 2019, 352, 33-37. | 5.1 | 7 |

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|---|---|---|---|
| 91 | Water Deficit Modulates the CO2 Fertilization Effect on Plant Gas Exchange and Leaf-Level Water Use Efficiency: A Meta-Analysis. Frontiers in Plant Science, 2021, 12, 775477. | 3.6 | 6 |
| 92 | The efficiency of organic C sequestration in deep soils is enhanced by drier climates. Geoderma, 2022, 415, 115774. | 5.1 | 6 |
| 93 | Redesign of dryland apple orchards by intercropping the bioenergy crop canola ( Brassica napus) Tj ETQq1 1 0.784314 rgBT /O | 5.6 | 6 |
| 94 | Land use affects the response of soil moisture and soil temperature to environmental factors in the loess hilly region of China. PeerJ, 0, 10, e13736. | 2.0 | 6 |
| 95 | Comparison of the rootâ€“soil water relationship of two typical revegetation species along a precipitation gradient on the Loess Plateau. Environmental Research Letters, 2021, 16, 064054. | 5.2 | 5 |
| 96 | Impacts of land use conversion on the response of soil respiration to precipitation in drylands: A case study with four-yearlong observations. Agricultural and Forest Meteorology, 2021, 304-305, 108426. | 4.8 | 5 |
| 97 | Dynamics of interspecific water relationship in vertical and horizontal dimensions under a dryland apple-Brassica intercropping system: Quantifying by experiments and the 3D Hi-sAFe model. Agricultural and Forest Meteorology, 2021, 310, 108620. | 4.8 | 5 |
| 98 | Vertical variation in shallow and deep soil moisture in an apple orchard in the loess hillyâ€“gully area of north China. Soil Use and Management, 2021, 37, 595-606. | 4.9 | 4 |
| 99 | Soil hydrothermal modeling in a dry alpine agricultural zone: The effect of soil airflow. Geoderma, 2021, 402, 115354. | 5.1 | 4 |
| 100 | Impacts of Interspecific Interactions on Crop Growth and Yield in Wheat (Triticum aestivum L.)/Maize (Zea mays L.) Strip Intercropping under Different Water and Nitrogen Levels. Agronomy, 2022, 12, 951. | 3.0 | 4 |
| 101 | Evaluation of Soil Water Availability (SWA) Based on Hydrological Modelling in Arid and Semi-Arid Areas: A Case Study in Handan City, China. Water (Switzerland), 2016, 8, 360. | 2.7 | 3 |
| 102 | Sloping Land Use Affects Soil Moisture and Temperature in the Loess Hilly Region of China. Agronomy, 2020, 10, 774. | 3.0 | 2 |
| 103 | An In-Situ Rainwater Collection and Infiltration System to Improve Plant-Available Water and Fine Root Growth for Drought Resistance. Applied Engineering in Agriculture, 2020, 36, 807-814. | 0.7 | 1 |
| 104 | Sloping land use affects the complexity of soil moisture and temperature changes in the loess hilly region of China. PLoS ONE, 2022, 17, e0262445. | 2.5 | 1 |