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Research Interests

- Mechanism of regulating water and salt transport by straw/sand barrier
- Mineralization mechanism of deep organic carbon in salinized soil
- Interaction between rhizosphere microorganism, water and salt distribution
- Reasonable cultivation layer construction and fertilization

Publication

Water and salt exchange flux and mechanism in a dry saline soil amended with buried straw of varying thicknesses(CN), *Geoderma*, 2020, DOI: 10.1016/j.geoderma.2020.114213

Buried straw layer plus plastic mulching improves organic matter fractions in an arid saline soil(CN), *Soil & Tillage Research*, 2017, DOI: 10.1016/j.still.2016.09.006

Buried straw layer and plus plastic mulching reduces soil salinity and increases sunflower yield in saline soils(CN), *Soil & Tillage Research*, 2016, DOI: 10.1016/j.still.2015.08.019

Subsurface organic amendment plus plastic mulching promotes salt leaching and yield of sunflower(CN), *Agronomy Journal*, 2018, DOI: 10.2134/agronj2018.02.0097

Buried straw layer and plastic mulching increase microflora diversity in salinized soil(CN),



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Journal of Integrative Agriculture, 2016, DOI: 10.1016/S2095-3119(15)61242-4

Effects of straw mulch and buried straw on soil moisture and salinity in relation to sunflower growth and yield(CN), Field Crops Research, 2014, DOI: 10.1016/j.fcr.2014.02.006

Effect of brackish water irrigation and straw mulching on soil salinity and crop yields(CN), Agricultural water management, 2010, DOI: 10.1016/j.agwat.2009.08.020

Effect of plough pan thickness on crop growth parameters, nitrogen uptake and greenhouse gas (CO₂ and N₂O) emissions in a wheat-maize double-crop rotation in the Northern China Plain: A one-year study(CN), Agricultural Water Management, 2019, DOI: 10.1016/j.agwat.2018.10.044

Changes in soil organic carbon and microbial community under varying straw incorporation strategies(CN), Soil & Tillage Research, 2020, DOI: 10.1016/j.still.2020.104735