

**Table S1.** Details of the publications.

Title	Author	Publication Titles	Publication Year
Study on Water-saving and Yield-increasing Mechanism and Appropriate Model of Winter wheat and Summer maize under Subsurface Drip Irrigation	Yang Mingda.	Henan Agricultural University	2021
Effects of Moistube Irrigation on Winter Wheat's Yield and Irrigation Water Use Efficiency	Zhang Mingzhi, Niu Wenquan, Lu Zhenguang, et al.	Journal of Irrigation and Drainage	2017
Effect of Deep Subsurface Irrigation on Evapotranspiration and Water Use Efficiency of Winter Wheat Based on Weighing Lysimeters	Song Wenpin, Wang Zhimin, Chen Xiaoli, et al.	Journal of Triticeae Crops	2016
Effects of irrigation models on the space distribution of root system and yield of winter wheat	Wang Jiandong, Gong Shihong, Xu Di, et al.	Journal of Hydraulic Engineering	2011
Effect of Different Infiltrating Irrigation and Film Mulching on WUE and Yield of Winter Wheat	Pei Yanting, Tian Qizhuo, Li Nana, et al.	Journal of Triticeae Crops	2009
Study on Efficient Utilization of Water and Fertilizer for Winter Wheat under Drip Irrigation in Yili River Basin	Jiang Yuxin.	Shihezi University	2020
Water-Saving Potential of Subsurface Drip IrrigationFor Winter Wheat	Jiang Hanbing, Yao Jiawei, Qi Yongqing	Sustainability	2020
The Effect of Water Regulation on Agronomic Traits and Water Use Efficiency of Winter Wheat	Xue Tingting, Ma juanjuan, Sun Xihuan	China Rural Water and Hydropower	2020
Effects of deep irrigation on water consumption and water use efficiency of winter wheat	Huang Jie, Sun Xiahuan, Ma Juanjuan, et al.	Agricultural Research in the Arid Areas	2017
The influence of different water supplied on root morphology and water uptake ability in winter wheat	Wang Bing.	Taiyuan University of Technology	2017
Growth and root water absorption model of winter wheat under different water irrigation conditions	Wang Pu.	Taiyuan University of Technology	2018
Study on irrigation strategy and root distribution prediction model of winter wheat under deep irrigation	Ge Zhiyuan.	Taiyuan University of Technology	2019
Effect of water control in combination of	Ren Wei, Yao	Chinese	2003

depth and amount on dry matter partition and water use efficiency of winter wheat	Kemin, Yu Qiang, et al.	Journal of Eco-Agriculture	
Effects of Shallow Drip Irrigation with Covering Soil on Water Consumption and Water Use Efficiency of Spring Wheat	Tian Xulang, Wang Zhenhua, Li Wenhao, et al.	Chinese Journal of Soil Science	2022
Effects of drip irrigation on root activity pattern, root-sourced signal characteristics and yield stability of winter wheat	Ma Shoutian, Wang Tongchao, Ma Shouchen	Agricultural Water Management	2022
Performance Automation Controller of Drip Irrigation Systems Using Saline Water for Wheat Yield and Water Productivity in Egypt	Mansour H A, Abd El-Hady M, Bralts V F, et al.	Journal of Irrigation and Drainage Engineering	2016
Effects of the irrigation quota and drip irrigation pipes spacing on growth and development of summer maize with subsurface drip irrigation	Yao Jiawei, Qi Yongqing, Li Huaihui, et al.	Chinese Journal of Eco-Agriculture	2021
Effect of subsurface irrigation on growth index and yield of maize	Zhao Jinghua, Yang Tingrui, Zhou Heping, et al.	Journal of Gansu Agricultural University	2020
Infiltration of irrigation water and energy saving test of maize (in Chinese)	Zhou Heping, Zhao Jinghua, Zhang Na, et al.	Scientia Sinica(Technologica)	2018
Effect of Micro-irrigation on Water Consumption and Output of Corn	Wang Yazhu, Wang Jianping.	Water Saving Irrigation	2019
Effect of different drip irrigation modes on spatial distribution variance of soil water and summer maize growth	Yang Mingda, Guan Xiaokang, Bai Tiantian, et al.	Journal of Henan Agricultural University	2016
Application of Subsurface Drip Irrigation to Maize Field in Aeolian Sandy Soil	Dou Chaoyin, Meng Weizhong, Tong Wei, et al.	Journal of Irrigation and Drainage	2018
Effects of drip fertigation yield, nutrient and water productivity and root distribution of spring maize	Wu Dali.	China Agricultural University	2018
Mechanism of Vertical Partial Root-zone Alternative Irrigation on Growth, Physiological and Yield of Summer Maize	Cao Yunxin.	North West Agriculture and Forestry University	2021

Influences of micro-irrigation and subsoiling before planting on enzyme activity in soil rhizosphere and summer maize yield	Zhang Mingzhi, Niu Wenquan, Xu Jian, et al.	Chinese Journal of Applied Ecology	2016
Effects of Mulched Drip Irrigation and Subsurface Drip Irrigation on Corn Water Consumption, Growth and Yield	Yuan Jiangjie, Li Guangyong, Yuan Zicheng.	Journal of Irrigation and Drainage	2015
Effects of Different Ways of Micro-moist Irrigation on Growth and Yield of Maize	He Yuqin, Cheng Ziyong, Zhang Rui, et al.	Journal of South China Agricultural University	2012
Water and Nitrogen Distribution and Summer Maize Growth in Subsurface Drip Irrigation System as Affected by Spatial Variations of Soil Properties	Li Jiusheng, Du Zhenhua, Li Yanfeng, et al.	Scientia Agricultura Sinica	2008
Effects of drip irrigation placement depth on distribution of soil water & nitrogen and spring maize yield	Li Bei, Li Jiusheng.	Journal of China Institute of Water Resources and Hydropower Research	2009
Experimental Research on Effect of Water-Saving and Yield Increase for Maize under Different Irrigation Techniques	Li Xiaoling, Liu Puhai, Cheng Ziyong.	Water Saving Irrigation	2006
Modeling of Different Irrigation Methods for Maize Using AquaCrop Model: Case Study	Thamer T, Nassif N, Almaeini A, et al.	Engineering	2021
Comparing evapotranspiration and yield performance of maize under sprinkler, superficial and subsurface drip irrigation in a semi-arid environment	Valentín F, Nortes P A, Domínguez A, et al.	Irrigation Science	2020
Evaluation of subsurface, mulched and non-mulched surface drip irrigation for maize production and economic benefits in northeast China	Wang Dan, Li Guangyong, Mo Yan, et al.	Irrigation Science	2021
Improving silage maize productivity using recycled wastewater under different irrigation methods	Cakmakci T, Sahin U.	Agricultural Water Management	2021

Efficacy of subsurface and surface drip irrigation regarding water productivity and yield of maize	Muneer M A, Arshad M, Shahid M A, et al.	Pakistan Journal of Agricultural Sciences	2022
Study on agronomic measure of spring maize hole irrigation sowing in hilly dry land of Sichuan Province	Shi Kai, Wang Xiaochun, Chen Cheng, et al.	Journal of Northeast Agricultural University	2020
Effect of shallow-buried drip irrigation on water consumption characteristics and yield of spring maize in semi-arid region of western Liaoning	Guo Jinlu, Gu Jian, Yin Guanghua, et al.	Chinese Journal of Ecology	2017
Effects of Mulched and Soil Covered Drip Irrigation on Growth of Maize in West Liaohe Plain	Jia Qiong, Shi Haibin, Li Ruiping, et al.	Journal of Soil and Water Conservation	2021
Difference analysis on seed yield and root cap characteristics for spring maize under water fertilizer and high yield optimization of shallow burying drip irrigation	Gao Xin, Yang Hengshan, Zhao Peijun, et al.	Acta Agriculturae Zhejiangensis	2022
Root Under Shallow-buried Drip Irrigation Effects of Irrigation Quota on Morphological and Physiological Characteristics of Maize Root Under Shallow-buried Drip Irrigation	Guo Zihe, Yang Hengshan, Zhao Peijun, et al.	Chinese Agricultural Science Bulletin	2022
Effects of different irrigation methods on root morphological and physiological biochemical characteristics of maize in the West Liaohe Plain	Xue Xinwei, Yang Hengshan, Zhang Ruifu.	Agricultural Research in the Arid Areas	2022
Effects of reduction of nitrogen and water of shallow drip irrigation on material distribution of root and canopy and utilization efficiency of water and nitrogen of maize under dense planting	Zhang Yushan, Yang Hengshan, Ge Xuanliang, et al.	Agricultural Research in the Arid Areas	2022
Effects of irrigation methods on yield and water and nitrogen utilization efficiency of spring maize in Xiliaohe Plain, China	Meng Fanhao, Yang Hengshan, Zhang Ruifu, et al.	Acta Agriculturae Zhejiangensis	2022
Effects of Different Drip Irrigation Modes on Starch Accumulation and Activities of Starch Synthesis-Related Enzyme of Spring Maize Grain in Northeast China	Zhang Jiahua, Yang Hengshan, Zhang Yuqin, et al.	Scientia Agricultura Sinica	2022

Effects of Optimal Nitrogen Application on Carbon and Nitrogen Footprints of Spring Maize Fields Under Shallow Buried Drip Irrigation in the Xiliaohe Plain	Tai Jicheng, Li Rui, Yang Hengshan, et al.	Journal of Soil and Water Conservation	2021
Effect of Reduction of Nitrogen and Irrigation on Dry Matter Accumulation and Utilization Efficiency of Water and Nitrogen of Spring Maize in Shallow Drip Irrigation	Zhang Mingwei, Yang Hengshan, Fan Xiuyan, et al.	Journal of Maize Sciences	2022
Maize response to irrigation and nitrogen under center pivot, subsurface drip and furrow irrigation: Water productivity, basal evapotranspiration and yield response factors	Mohammed A T, Irmak S.	Agricultural Water Management	2022
Assessment of fodder corn grown under surface and subsurface drip irrigation in Mendoza, Argentina	Ortega Justavino R J, Loyola P F, Llera Giménez J A.	Revista de la Facultad	2021
Evapotranspiration and components of corn ( <i>Zea mays</i> L.) under micro irrigation systems in a semi-arid environment	Dehghanisanij H, Kanani E, Akhavan S.	Spanish journal of agricultural research	2020
Narrow row corn production with subsurface drip irrigation	Stone K C, Bauer P J, Busscher W J, et al.	Applied Engineering in Agriculture	2008
The Effects of Irrigation Methods with Effluent and Irrigation Scheduling on Water Use Efficiency and Corn Yields in an Arid Region	Hassanli A M, Ebrahimizadeh M A, Beecham S.	Agricultural water management	2009
Corn and sorghum ET, E, yield, and CWP as affected by irrigation application method: SDI versus mid-elevation spray irrigation	Evet S R, Marek G W, Colaizzi P D, et al.	Transactions of the ASABE	2019
Research on the Effects of Subsurface Drip Irrigation In Cotton	Kong Fanming.	Shihezi University	2013
The Effect of Drip Irrigation with Saline Water to the Distribution of Salt and Development and Yield of Cotton	Wang Yanna, Hou Zhenan, Gong Jiang, et al.	Journal of Shihezi University(Natural Science)	2007
Research on Influence of Subsurface	Wang Zhenhua,	Water Saving	2006

Drip Irrigation on Cotton Physiology Character and Yield in Xinjiang	Lv Desheng, Wen Xinming, et al.	Irrigation	
Effect of Pipeline Buried Depth and Water Amount of Trace Irrigation on Cotton Quality and Yield	Chen Liyu, Zhang Lifeng, Lu Zhanyuan, et al.	Water Saving Irrigation	2020
Effect of Irrigation Amount and Buried Depth of Drip Irrigation Tape on Cotton Production in Subsurface Drip Irrigation and No Mulch Plastic Film Farmland	Xie Haixia, He Shuai, Zhou Jianwei, et al.	Journal of Irrigation and Drainage	2012
Effects of soil salinity on growth and nutrition absorption of Cotton under surface and subsurface drip irrigation	Ma Li.	Shihezi University	2008
Assessment of water productivity using different drip irrigation systems for cotton	Çetin O, Kara A.	Agricultural Water Management	2019
Utilizing Subsurface Drip Irrigation and Conservation Tillage in Cotton Production Systems	Sij J W, Bordovsky D G, Jones D L, et al.	SRX Agriculture	2010
Effect of Subsurface Drip Irrigation on Cotton Plantations	Kalfountzos D, Alexiou I, Kotsopoulos S, et al.	Water Resources Management	2006
Water distribution from a subsurface drip irrigation system and dripline spacing effect on cotton yield and water use efficiency in a coastal plain soil	Grabow G L, Huffman R L, Evans R O, et al.	Transactions of the ASABE	2006
Improving Cotton Yield, Water Use and Net Income in Different Drip Irrigation Systems Using Real-Time Crop Evapotranspiration	Çetin Ö, Üzen N, Temiz M G, et al.	Polish Journal of Environmental Studies	2021
Cotton Subsurface Drip and Overhead Irrigation Efficiency, Maturity, Yield, and Quality	Whitaker J R, Ritchie G L, Bednarz C W, et al.	Agronomy journal	2008