

Jin Sun



Areas of Research

Protected Horticulture, Soilless Culture, Vegetable Stress Biology.

Contact Information

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Research Interests

Protected Horticulture; Soilless Culture; Vegetable Stress Biology

Systematic analysis of physiological and molecular mechanisms of exogenous spermidine (Spd) induced resistance in cucumber plants, and the signal pathway of Spd—GA₃—GT-3b—SAMs—CDPK6—Ca²⁺ was constructed to enhance salt tolerance of cucumber seedlings.

Analysis of compatibility mechanism of cucumber/Pumpkin combination, it was found that miRNA156 and its target gene SPL could regulate the formation of callose at the graft healing site, and then affect the compatibility of grafted seedlings.

The effect of arbuscular mycorrhizal fungi (AMF) on the growth of tomato seedlings and its mechanism were elucidated, and the mycorrhizal matrix products was developed for large-scale production.

A good F1 rootstock combination was developed through genetic breeding of rootstock pumpkin.

Education Background

Bachelor: Southwest University

Doctor: Nanjing Agricultural University

Work experience

Assistant Professor, Gansu Academy of Agricultural Sciences, 1996-2005

Associate Professor, Nanjing Agricultural University, 2009-2019

Professor, Nanjing Agricultural University, 2019-

Honors and Awards

Science and Technology Progress Award (Ministry of education, China),

Science and Technology Progress Award (Ministry of Agriculture, China),

Agricultural Technology Extension Award (Jiangsu Provincial People's Government).

Selected Publication

Guo S.R., Sun J (Eds). *Soilless culture (3rd Edition)*. 2018. China Agricultural Press, Beijing.

Guo S.R., Sun J (Eds). *Protected horticulture (3rd Edition)*. 2020. China Agricultural Press, Beijing.

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Yan Ren, Qing Xu, Liwei Wang, Shirong Guo, Sheng Shu, Na Lu, Jin Sun*. Involvement of metabolic, physiological and hormonal responses in the graft-compatible process of cucumber/pumpkin combinations was revealed through the integrative analysis of mRNA and miRNA expression. *Plant Physiology and Biochemistry*, 129 (2018) 368–380, doi.org/10.1016/j.plaphy.2018.06.021

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of CsGT-3b to the GT-1 element within the CsSAMs promoter. *Planta*, 2017, 245:889–908, DOI 10.1007/s00425-017-2650-7.

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Qing Xu, Shi-Rong Guo, He Li, Nan-Shan Du, Sheng Shu, Jin Sun*. Proteomics analysis of compatibility and incompatibility in grafted cucumber seedlings. *Plant Physiology and Biochemistry*, 2016, 105: 21-28.

Yinghui Yuan, Sheng Shu, Shuhai Li, Lizhong He, He Li, Nanshan Du, Jin Sun*, Shirong Guo. Effects of Exogenous Putrescine on Chlorophyll Fluorescence Imaging and Heat Dissipation Capacity in Cucumber (*Cucumis sativus* L.) Under Salt Stress. *J Plant Growth Regul.*, 2014, 33:798-808.

J. Sun, Y.X. Jia, S.R. Guo*, J. Li, S. Shu. Resistance of spinach plants to seawater stress is correlated with higher activity of xanthophyll cycle and better maintenance of chlorophyll metabolism. *PHOTOSYNTHETICA*, 2010, 48(4):567-579.

Reference

<http://yyxy.njau.edu.cn/info/1082/12038.htm>