Xuejun Dong
Assistant Professor of Crop Physiology
Texas A&M AgriLife Research – Uvalde, TX
1619 Garner Field Road Uvalde, TX 78801
Tel: (830) 278-9151; Fax: (830) 278-1570; email: xuejun.dong@ag.tamu.edu

Education/Training

1997 PhD Ecophysiology, Chinese Academy of Sciences, Beijing, China
1991 MS Ecophysiology, Chinese Academy of Sciences, Beijing, China
1987 BS Plant Physiology, Lanzhou University, Lanzhou, China

Positions and Employment

2013– Present	Assistant Professor. Texas A&M AgriLife Research, Uvalde TX and Department of Soil and Crop Sciences, Texas A&M University, College Station, TX.
2000–2013	Research Specialist, Assistant Range Scientist/Adjunct Professor, Range Scientist/Adjunct Professor. North Dakota State University Central Grasslands Research Extension Center, Streeter, ND.
1999–2000	Research Associate. Duke University, Department of Botany, Durham, NC.
1997–1999	Research Associate Professor. Institute of Botany, Chinese Academy of Sciences (IBCAS), Beijing, China.
1991–1997	Research Assistant Scientist, IBCAS, Beijing, China.

Program Overview

My program focuses on understanding soil-plant water relations and root/shoot processes for crop management in water-limited cropping systems. The leading research areas include (a) understanding plant biotic and abiotic stresses associated with water deficit and plant adaptation processes; (b) analyzing crop systems and developing new technologies to minimize risk, improve productivity and enhance soil quality and water conservation. I am currently serving as a guest-lecturer to a new graduate course, "Root Biology", which is cross-listed in MEPS and HORT at Texas A&M, College Station.

Significant 5 Year Accomplishment

Leaf water relations and photosynthesis of grassland plants was my first research highlight since 2011. Field-collected data of leaf photosynthetic capacity of native and exotic grasses suggested that photosynthetic capacity was negatively correlated with plant competitive success. I proposed that this negative correlation was the result of strong competition for limited soil resources among plant species in the mixed-grass prairie. My second research highlight was the CO_2 flux from desert and grassland ecosystems. In particular, I collaborated with USDA scientists to conduct a national synthesis of CO_2 flux from managed U.S. grasslands. In southwest Texas, my co-authors and I demonstrated the use of irrigation timing (by delivering drip irrigation at night-time) to ameliorate high night temperature stress in corn. Finally, a current ongoing study at my group is looking at ecophysiological mechanisms responsible for long-term tillage effects on crop yield performance and soil health. Since 2011, I authored/ co-authored 15 peer-reviewed journal publications and supervised 5 post-doctoral researchers/visiting scholars.

Publications

Ten most recent publications in peer-reviewed journals **(***49 total)*

1. Z.-S. Zhang, X.-J. Dong, B.-X. Xu, Y.-L. Chen, Y. Zhao, Y.-H. Gao, Y.-G. Hu and L. Huang. 2015. Soil respiration sensitivities to water and temperature in a revegetated desert. JGR - Biogeosciences DOI:10.1002/2014JG002805
2. X. Dong and B. D. Patton. 2015. Predicting soil water retention curves based on particle-size distribution using a Minitab macro. Afr. J. Soil Sci. 3(1): 079-085.
3. X. Dong, J. Patton, L. Gu, J.-Z.Wang and B. Patton. 2014. Leaf photosynthesis and plant competitive success in a mixed-grass prairie: With reference to exotic grasses invasion. J. Ecosyst. Ecograph. 4:152. doi: 10.4172/2157-7625.1000152.
4. X. Dong, D. Leskovar, K. Crosby and T. Marek. 2014. Quantifying crop water use in arid and semi- arid regions: Opportunities based on soil-plant water relations. J. Arid Land Studies. 24-1: 141-144.
5. X. Dong, J. Patton, G. Wang, P. Nyren and P. Peterson. 2014. Effect of drought on biomass allocation in two invasive and two native grass species dominating the mixed-grass prairie. Grass Forage Sci. 69: 160-166.
6. Y. Sun, L. Gu, R. E. Dickinson, S. G. Pallardy, J. Baker, Y. Cao, F. M. DaMatta, X. Dong, D. Ellsworth, D. Van Goethem, A. M. Jensen, B. E. Law, R. Loos, S. C. V. Martins, R. J. Norby, D. Weston, K.Winter. 2014. Asymmetrical effects of mesophyll conductance on fundamental photosynthetic parameters and their relationships estimated from leaf gas exchange measurements. Plant Cell Environ. 37: 978-994.
7. M. A. Liebig, S. L. Kronberg, J. R. Hendrickson, X. Dong, and J. R. Gross. 2013. CO_2 efflux from long-term grazing management systems in a semiarid region. Agricult. Ecosyst. Environ. 164: 137-144.
8. X. Dong, F.-C. Cheng, D.-J. Wang, G.-J. Wang, B. D. Patton and P. E. Nyren. 2012. Mixed-grass prairie rhizome biomass is influenced by cattle grazing intensity. Grass Forage Sci. 68: 199-204.
9. X. Dong, B. Patton, P. Nyren, R. Limb, L. Cihacek, D. Kirby and E. Deckard, 2011. Leaf-water relations of a native and an introduced grass species in the mixed-grass prairie under cattle grazing. Appl. Ecol. Environ. Res. 9: 311-331.
10. W.-H. Wang, X.-Q. Yi, F.-H. Wu, A.-D. Han, X.-J. Dong, J.-X. He, Z.- M. Pei and H.-L. Zheng. 2011. Calcium-sensing receptor regulates stomatal closure through hydrogen peroxide and nitric oxide in response to extracellular calcium in Arabidopsis. J. Exp. Bot. 63: 177-190.

Synergistic Activities

1. Member of Crop Science Society of America, American Society of Agronomy, Soil Science Society of America
2. Member of NCCC31 (Ecophysiological Aspects of Forage Management), representing North Dakota State University from 2005-2013.
3. Associate Editor, *Arid Land Research and Management,* 2009-present
4. Associate Editor/Board Member, *Photosynthetica*, 2010– present