

PhD Position
Utah State University
Logan, UT

The Invasive Plant Science Lab at Utah State University (<https://www.invasiveplantslab.com/>) seeks to fill a PhD position to work on a recently awarded grant to improve our understanding of the effects of drought-tolerant (DT) plant hybrids and efficient irrigation systems for water-challenged cropping systems on plant-pest (arthropod and weeds) interactions to develop and optimize sustainable and multidisciplinary integrated pest management. Specifically, we propose to test the effects of DT corn hybrids exposed to water-stressed conditions on the outbreak of spider mites and competitive interactions with weeds. Water-efficient irrigation systems are being increasingly adopted by corn producers to meet the demands of limited water resources and maintaining a healthy crop. Therefore, we also propose to evaluate how changes in irrigation practices impact the interactions among DT corn, spider mites, and shared weed hosts. Our novel approach will improve our ability to predict pest pressures (outbreaks or competition) utilizing water-conservation management strategies (DT plant hybrids and irrigation practices) and develop new pest management strategies in a water-stressed cropping environment.

The PhD student will conduct research on the weed science (i.e., plant competition) component of this study and work with researchers, a postdoc, and summer undergraduate students in the Departments of Plants, Soils, & Climate and Biology. The successful candidate is expected to associate with faculty in the College of Agricultural and Applied Sciences to gain broad experiences in entomology, plant physiology, entomology, hydrology, and weed science. Candidates should have an MS degree in plant ecology, weed ecology, agroecology or agronomy, plant physiology (or a closely related field); the ability to communicate effectively both in writing and orally; laboratory or field research experience; and a willingness to work in inclement weather including extreme heat. Ideal candidates will have strong quantitative and statistical skills and a demonstrated ability to perform independent field research.

The position will start in late spring 2019 (start date negotiable), and interested candidates should apply no later than April 1, 2019. To apply, submit (1) a cover letter describing experience and interests, (2) CV, (3) transcripts, (4) GRE and TOEFL (if required) scores, and (5) contact information for three professional references to: steve.young@usu.edu