## EFFECTS OF EPISODIC DROUGHT STRESS ON GAS EXCHANGE IN WEST TEXAS COTTON Fulvio R. Simao Glen Ritchie Texas Tech University/Texas AgriLife Research Lubbock, TX Craig Bednarz Bayer CropScience Lubbock, TX

## Abstract

Improving irrigation management practices is important for increasing farmers' profits and also for increasing the Ogallala life span in West Texas. The objective of this work was to evaluate the effects in some physiological parameters of controlled drought in field conditions, supporting the development of water management strategies for irrigated cotton. Field experiments were conducted at the Texas Tech Research farms during the 2010 and 2011 seasons. The gas exchange measurements were done during several stages at the growing season using a LiCor 6400 gas exchange system. Data showed that episodic drought periods can affect photosynthesis and transpiration with consequences in crop yield. These results can be important for developing more efficient irrigation management strategies.