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## 187-2 Different Mechanisms of Adaptation to Drought Stress In Two Wheat Cultivars?.

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Texas AgriLife Research winter wheat cultivars TAM 111 and TAM 112 are widely grown in the U.S. Southern High Plains. Based on the yield performance, both cultivars are considered drought tolerance. However, the two cultivars may have different mechanisms to adapt to drought stress. The objective of this study is to evaluate the physiological response of these cultivars to drought and identify possible traits associated with drought tolerance. The two cultivars were grown under two soil water regimes (dryland and irrigated) in two seasons (2009-2010 and 2010-2011) at Bushland, TX. Field measurements include profile soil water content, plant water potential, canopy temperature depression, gas exchange, biomass accumulation, and yield. The results from this study will help us to better understand the differences in adaptation to drought stress between the two cultivars and identify traits related to drought tolerance.

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