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**Sabrina Deleon\*** (s.deleon@ttu.edu), Lubbock, TX 79413. *Uptake, Translocation, and Stress Effects of Carbon Nanotubes in Drought-Induced Corn*. Preliminary report.

Carbon nanotubes are currently one of the most used manufactured nanomaterials. However, these materials are not regulated and there are concerns regarding their safety for the environment and human health. This study was conducted to evaluate uptake of various types of carbon nanotubes in corn under ideal watering and drought conditions. Corn was exposed to either non-functionalized carbon nanotubes (CNTs) or functionalized carbon nanotubes (COOH-CNTs). Corn plants were grown for 21 days in soil with no CNTs/COOH-CNTs or 10 mg/kg of CNTs or COOH-CNTs in a greenhouse with natural day:night conditions. In addition to growing plants under ideal conditions, plants were also grown under conditions simulating a seven-day drought and photosynthesis measurements were taken using a LI-6400XT Portable Photosynthesis System. Following harvest after 50 days, roots, stems, and leaves were dried, grounded, and analyzed using a microwave-induced heating technique to quantify CNT and COOH-CNT concentrations in the corn. Plants analyses are currently ongoing. (Received February 06, 2014)