

EastFIRE Lab/ESTC Field Experiment at USDA/ARS

ESTC/EastFIRE team had a field experiment at USDA-ARS Beltsville Agricultural Research Center, Maryland on June 6, 2010. The field experiment was led by Prof. John Qu, the director of ESTC, and Dr. Raymond Hunt from USDA ARS.

Forty leaf samples in total were collected from trees of linden and black oak. Spectral reflectances and transmittances for each of four leaves were measured with an integrating sphere and an ASD FieldSpec Pro FR spectroradiometer, and then the data for two stacked leaves, three stacked leaves and four stacked leaves. Leaf fresh weight, thickness, chlorophyll content, area, and dry weight were measured for each leaf.

The overall objective of this field experiment was to investigate the use of high resolution shortwave infrared reflectance spectroscopy for the retrieval of dry matter content for fresh leaves on the canopy level.

