Photos of USDA-ARS Maize Water Productivity Trials 2008 - 2011

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Photo 1. USDA-ARS Limited Irrigation Research Farm, Greeley, CO
Trials

Weather Station

Bowen Ratio ET
55% Corn

Bowen Ratio ET
100% Corn

Bowen Ratio ET
100% Pinto Bean

Wheat Varieties

Photo 2. LIRF 2010 (false color aerial image)
Photo 3. Layout of LIRF Water Productivity Plots, 2010 (false color aerial)
Photo 4. Aerial Image of LIRF Water Productivity Plots, 2008
Photo 5. LIRF WPF surface drip irrigation system showing delivery to surface drip tubing in every row from a 12-row manifold from a riser at the corner of each plot.
Photo 6. LIRF WPF Trial irrigation control and monitoring system showing hydraulic valves and turbine flow meters for each treatment.
Photo 7. LIRF Weather Station – CoAgMet GLY 04
Photo 8. Soil Water Content measurement with Neutron Moisture Meter and Portable TDR

- Neutron Moisture Meter
- Portable TDR (Minitrase)
Photo 9. Young maize planted in wheat residue, and drip tubing
Photo 10. Maize at two growth stages.
Photo 11. Impact of water treatment on maize growth at tassling showing short plants due to water stress in the foreground.
Photo 12. WPF Maize on 8/4/08 showing effects of treatments T1 and T6 on crop growth and condition

Treatment T1
Irrigation: 300mm
Precip: 40mm
ETc: 300mm

Treatment 6
Irrigation: 115mm
Precip: 40mm
ETc: 150mm
Photo 13. WPF Maize on 7/28/08 showing effects of treatments T1 and T6 on crop growth and condition. Images from high clearance reflectance tractor used to determine canopy ground cover.
Photo 14. Effect of water treatment on maize ear size and grain fill
Photo 15. Effect of 7/27/09 hail on maize crop showing shredded leaves
Photo 16. Bowen Ratio Energy Balance instrumentation in adjoining maize field, 2010
Photo 17. High clearance reflectance tractor taking canopy ground cover images.