Cottonwood Range and Livestock Research Station (CES): Northern Plains Domain

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Location within Domain:



History: Cottonwood was established in 1907 and has had an intensive history of field research (see: http://ars.sdstate.edu/CottonwoodStation/index.HTM); one of the original International Biological Program grassland biome sites established in 1970 and supported by NSF funding.

Key Characteristics: Northern mixed-grass prairie vegetation (western wheatgrass-green needlegrass overstory with blue grama-buffalograss understory; diverse mixture of forbs and lesser amounts of shrubs). Topography is gently rolling with predominantly clay soils and diverse ecological sites (MLRA 63A; NRCS eFOTG). Livestock production and wheat farming are major historical land uses. Recreation/hunting is a growing land use in this region. Soil/landform, ecosystem performance, land use history, and climatic features are characteristic of Domain #9. Existing resources can help address climate, land use, and invasive NEON response themes representative of the northern mixed-grass prairie. Partnerships among USDA-ARS, USDA-NRCS, NOAA, South Dakota State University, and South Dakota School of Mines and Technology exist.

Existing Infrastructure: Member of numerous existing networks including U.S. Climate Reference Network, International Biological Program (IBP) Grassland site; existing instrumented tower (Eddy flux) and watershed flumes; long-term data on plant and livestock, and ecosystem processes (e.g., ANPP).

Facilities: On-site structures provide housing, field laboratories, equipment fabrication, maintenance, repair, and storage, and logistical support; 2 FTE on site support; modern utilities including high speed internet connection. Year around road access throughout the station; secured area with no unescorted public access.