Soil Carbon Database for Wyoming. (S05-vance211333-Oral)

Authors:

- G.F.Vance - *University of Wyoming*

Abstract:

Fossil fuel emissions, land use changes, fires and geological events have altered the amount of CO2 in the earth's atmosphere. Mitigating atmospheric CO2 through C sequestration via photosynthesis into new biomass and soil C requires an understand of terrestrial C sources and sinks. For this study, both Wyoming county and state databases were utilized to identify soils information (e.g., mapping units, soil series, subgroups). Soil organic C, bulk density and horizon depth from NRCS's soil database were used to determine soil C contents. GIS data layers were developed for Wyoming's 23 counties and the state that depict weighted soil C volumetric concentrations at 15 cm and 1 m depths. These data layers and resulting maps will be used for baseline examination of estimated soil C contents throughout Wyoming. The maps can be used for broad-scale planning and general assessment for alternative land, forestry and cropping management practices. In addition, models that predict soil C storage and release due to shifts in vegetation and land use changes require a soil C modeling component.

Corresponding Author Information:

George Vance
University of Wyoming
Department of Wyoming
Laramie, WY 82071-3354

phone: 307 766-2297
fax: 307 766-6403
e-mail: gfv@uwyo.edu

Presentation Information:

Presentation Date: Monday, November 11, 2002
Presentation Time: 11:00 am

Keywords:

Carbon sequestration, Soil Survey, Mapping Units, Soil Carbon