

Landscape Sensitive Soil Quality Benchmark Sites in Alberta, Canada. (S05-cannon174551-Poster)

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Abstract:

The AESA (Alberta Environmentally Sustainable Agriculture) Soil Quality Program was established in 1997 to determine the state of soil quality across Alberta and to determine the risk of change in soil quality with various management practices. Considering limited resources, a diverse farming area of 233,839 km², and time required to observe measured changes in soil parameters, we realized that modeling would need to be employed. Soil quality modeling and the subsequent extrapolation of site-specific data to regional levels require good quality data on climate, soils, land use and management practices. There is a need for a monitoring network of sites to provide the data to test and validate these models. The AESA Soil Quality Benchmark Program was thus established in 1998. Forty-three sites, located in 42 ecodistricts within the agricultural area of Alberta, represent the soil-landscape patterns and agronomic practices central to each ecodistrict. Soil topographic sequences (upper, mid and lower slope positions) are monitored at each site. We will introduce the Soil Quality Benchmarks and look at several soil quality parameters based on landscapes and ecostratification.

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