

Stability of Yield and Quality in Northern Plains Cropping Systems. (A08-long114425-Oral)

Authors:

- D.S.Long* - *Montana State University*
- D.E.Clay - *South Dakota State University*

Abstract:

Crop yield and quality are spatially variable within farm fields. This study was conducted to determine the stability of this variation in time and investigate the use of geographic analysis techniques for developing a better understanding of the causes of yield variation. Terrain modeling theory suggests that in semiarid regions topography influences the way that water moves through the landscape, and thus yield variability should follow spatial patterns in topography within farm fields. Support for such a hypothesis can be obtained from analysis of point pattern maps in a Geographic Information System. Research from a variety of localities will be included in this discussion. Conclusions are drawn about applicability of the results.

Corresponding Author Information:

Daniel Long	phone: 406 265 6115
Montana State University	fax: 406 265 8288
Northern Agric. Res. Center, HC 36 Box	e-mail:
43	dlong@montana.edu
Havre, MT 59501	

Presentation Information:

Presentation Date: Monday, November 11, 2002

Presentation Time: 10:45 am

Keywords:

crop yield , crop quality, temporal stability, precision agriculture