

1116-62-1307

**Mitra Lal Devkota\*** (mdevkota@shawnee.edu), Department of Mathematical Sciences, 940 Second Street, Portsmouth, OH 45662, and **Gary D Hatfield** and **Rajesh Chintala**. *Spatial modeling of crop residue yield potential for the north central region of the USA.*

In this research work, Spatial Modeling Techniques applied to crop residue yield potential were discussed. In addition to the traditional regression method; various types of spatial regression techniques were used. Comparative studies of these modeling techniques were carried out using a real world data set and an artificially generated spatial data set. The results showed that the Geographically Weighted Regression model was more suitable for the purpose of incorporating the spatial autocorrelation of the regression residuals. .... (Received September 18, 2015)