

Interactive comment on “Evaluating topographic wetness indices across central New York agricultural landscapes” by B. P. Buchanan et al.

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Although artificial surfaces simulating various terrain conditions have been proposed to evaluate algorithms for some important regional topographic attributes (such as specific catchment area and topographic wetness index (TWI)) (e.g., Zhou and Liu 2002, Qin et al. 2013), the evaluation of these topographic attributes based on field observations is essential. The study presented in this paper impresses me with an exhaustive analysis on the different aspects (i.e., data source, resolution, slope algorithm, flow-direction algorithm, TWI form, and post-processing) effecting TWI results based on field observations.

As the designer of the MFD-md algorithm, an MFD algorithm adaptive to local terrain

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conditions (Qin et al. 2007), I'm very curious about the performance of MFD-md in this experiment. It will be appreciated if the MFD-md algorithm could also be included in the evaluation in the following study.

References:

Qin C, A-X Zhu, T Pei, B Li, C Zhou, L Yang. An adaptive approach to selecting a flow-partition exponent for a multiple-flow-direction algorithm. *International Journal of Geographical Information Science*, 2007, 21(4): 443-458.

Qin C-Z, L-L Bao, A-X Zhu, X-M Hu, B Qin. Artificial surfaces simulating complex terrain types for evaluating grid-based flow direction algorithms. *International Journal of Geographical Information Science*, 2013, 27(6): 1055-1072.

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