

Direct vs Traditional Potato Planting: Potential in Manitoba – Year 2 Assessment

Scott Graham¹, Chad Berry², and Vikram Bisht³. ¹*J.R. Simplot Company, Portage La Prairie,* ²*UTH Farms, Cypress River,* ³*MB Ag & Resource Development, Carman Manitoba, R0G 0J0.*

Traditionally, potato farmers across North America make multiple tillage passes in preparing the soil prior to planting. In many Manitoba potato-growing areas, wind erosion in a potato field can create many challenges, before during and after the potato crop. A side-by-side demonstration trial was conducted again in Cypress River, Manitoba to evaluate the performance of direct vs traditional planting, in reducing soil erosion, improving soil health and sustainability, while maintaining or improving high yield and quality. The trial field was deep-ripped in the fall, as a normal practice. In year two, potatoes were planted into wheat stubble directly or after the field had been cultivated in the fall (Traditional). In this trial, the crop residue cover was significantly more in direct planted than traditional. The hills in the direct planted treatment were consistently less eroded than the traditional planting. As in first year trial, the direct seeding was slower to emerge but crop growth caught up and by week six. There were no statistical differences between direct vs. traditional seeding methods in yield and tuber quality parameters. Due to two fewer cultivation passes, there was a saving of 2.5 gallons of diesel fuel per tillage pass, which translates in to reduced carbon foot-print of the direct planted potatoes. Direct planting in to stubble may be suitable under certain conditions of soil and wind erosion; further studies are needed to confirm under different soil types and crops into which direct planting would succeed.