

## **The 2021 Manitoba Fall Soil Moisture**

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Soil moisture considerations are important for many farm management decisions from seeding to post-harvest operations. Compared to thermo-gravimetric soil moisture method that is time-consuming, destructive and non-replicable, soil moisture sensors use a property of the soil, such as dielectric permittivity, to determine the soil water content. The permittivity of water is ~80, dry soil ~5, ice ~3 and air is 1. Therefore, an increase in soil moisture content increases the dielectric permittivity of the soil. Fall soil moisture status provides an indication of the amount of water that may be available to crops at the start of the next growing season. Given how dry 2021 growing season was, fall precipitation, especially, snow on unfrozen soil in mid-November, helped provide much needed soil moisture recharge. The poster highlights soil moisture monitoring in Manitoba and showed some maps of the 2021 fall soil moisture status prior to soil freeze-up.