

## Climate and Fall Shoulder Cover Crops: Where Do They Intersect?

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### **Abstract**

Excess moisture typical of soils in Manitoba during the early growing season, caused by snowmelt and heavy rainfall, poses challenges to achieving optimal soil strength for trafficability and timely field operations. Fall shoulder cover crops, such as fall rye, offer a potential solution to improving spring field trafficability by managing soil moisture content. A multi-year study initiated in fall 2020 near Cartwright, MB, was conducted to examine the impact of fall rye on soil trafficability. Historical daily average temperatures (2015–2023) were analyzed, focusing on September 21, the earliest seeding date used in the study. Successful establishment required a minimum of four consecutive weeks with daily average temperatures above 10°C. Results revealed frequent risks of poor establishment due to insufficient temperature conditions prior to the cold hardening periods. Data on the impact of the fall rye cover crop on trafficability in spring will be analyzed and presented.