

Issue 7 – June 21, 2024

Manitoba Potato Report



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Provincial Summary

- In spite of frequent rains, most potato fields are doing very well, with over 85% of the fields estimated to have emergence. Fields are at varying growth stages, from just emerging to over 8-inches in height.
- Early planted fields are showing good tuber formation.
- Cumulative rain so far, is 155 to 211% of normal in potato growing areas.
- Overwintering adult Colorado potato beetles are now very active in parts of the province.
- Regular weekly reports with updates on disease and insect pests, including late blight risk forecasts on potatoes will also be available at <http://www.mbpotatoes.ca/index.cfm>. The site also carries SPRAYcast®, providing 3-day spray-advisory weather forecasts for selected sites.

Ag Weather Data

Precipitation and Soil Moisture

- The top 30 cm was generally wet by June 16, with few potato growing areas becoming optimal with respect to field capacity (Fig. 1). The 0-120 cm depths also were wet to very wet relative to field capacity. <https://www.gov.mb.ca/agriculture/weather/pubs/soil-moisture-30cm.pdf> and <https://www.gov.mb.ca/agriculture/weather/pubs/soil-moisture-120cm.pdf>
- After heavy rains on May 25, there have been frequent rain events which kept the soil moisture high. June 18 rains were quite widespread across Manitoba. Precipitation (mm) in May and up to June 16 was above normal across agro-Manitoba, ranging from 155% (Holland) to 211% (Carman) in the selected sites (Table 1). <https://www.gov.mb.ca/agriculture/weather/pubs/percent-normal-precipitation.pdf>. After May 25, scattered rains on June 3, 11, 13, 16, 18 and 19 rains were quite widespread across Manitoba (Fig. 2), which led to many wet / flooded spots in potato fields in many areas of Manitoba.

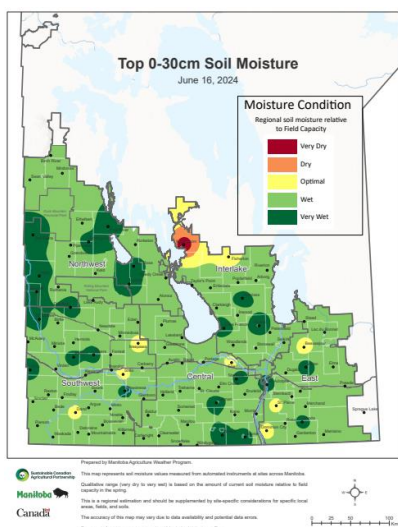


Fig. 1: 0-30 cm depth soil profile was wet to very wet relative to field capacity. Similarly 0-120 cm depths were wet in most of agro-Manitoba potato areas. Ground operations were slowed down in many fields due to wet conditions.

[Province of Manitoba | agriculture - Weather Conditions and Reports \(gov.mb.ca\)](http://www.gov.mb.ca/agriculture/weather/conditions-reports/)

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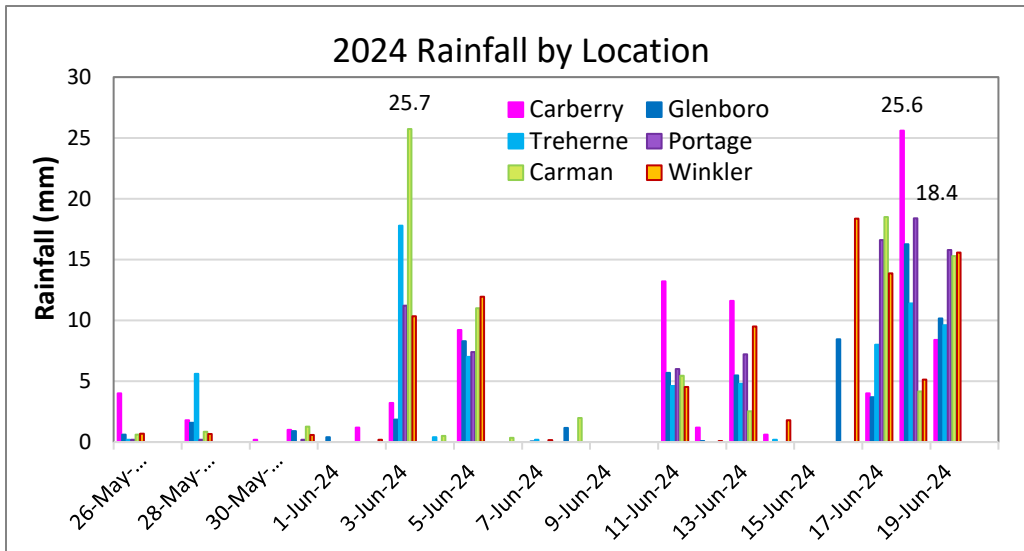


Fig. 2. Heavy and widespread rain on May 25 were followed by frequent rains in June, leading to many wet fields across Manitoba.

Temperatures – Air and Soil

- P-Days (Potato Physiological days), useful cumulative heat units for potato growth between 7 and 30 °C was slightly above normal (100 to 125 % of normal) during the June 1 to 16 (Fig.3). <https://www.gov.mb.ca/agriculture/weather/pubs/percent-normal-p-day.pdf>
- The heat accumulation in terms of GDD from May 1 to June 16 appears to be near normal. <https://www.gov.mb.ca/agriculture/weather/pubs/percent-normal-gdd.pdf>
- The daytime high temperatures (June 10 to 16) ranged from 26.1 (Rivers) to 29.6 °C (Carman) and overnight lows ranged from temperatures 3.4 (Bagot and Holland) to 6.9 °C, (Morden) (Table 1). Daytime highs were generally 3-4 °C warmer than last week.
- Soil temperatures have warmed up at 5 cm depths (up to 20 °C) and 20 cm (up to 18 °C), by mid-June.

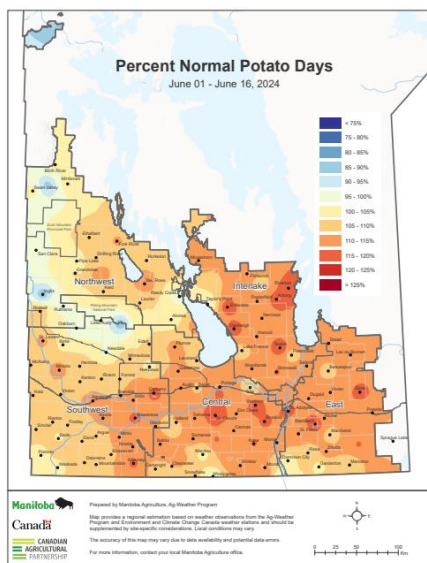


Fig. 3): The cumulative potato heat units, P-days are 100 to 125 % above normal from June 1 to 16.

Weather Data Summary for Selected Potato Site Stations

- The week (June 10 - 16) has been 3-4 °C warmer than the previous week (Table 1).
- Cumulative rains in 2024 are above the 30-year normal, as in 2022, unlike near-drought conditions in 2023.
- The week's rainfall ranged from 4.3 (Austin) to 47.9 mm (Winkler). Rainfall was much higher than last week's, and the cumulative rainfall (May 1 to June 16) was still 155 to 211% of the 30-year normal, causing minor flooding in many fields (Fig. 4 a, b, c).
- The last few days has been marked by a few thunderstorms, with strong winds and scattered hail.
- According to the Environment and Climate Change Canada (ECCC) weather forecast, more scattered rain is expected from Friday night (June 21) to Monday (June 24) across Manitoba.



Fig.4 a, b, c: Thunderstorms caused scattered heavy downpours in some areas, and caused flooding in field crops (a) and in potato fields (b, c). Photos: Vikram Bisht (Manitoba Agriculture)



Table 1. Manitoba Ag Weather Data – June 10 - June 16

Region	Max Temp (°C)	Min Temp (°C)	Rain (mm) for the week	Rain (mm) (Since May 1)	2024 Rainfall (% of normal) since May 1	2023 Rainfall (% of normal) May 1 – Jun 18	2022 Rainfall (% of normal) May 1 – Jun 14
Altona	28.2	5.2	35.3	163	166	13	150
Austin	27.9	5.3	28.1	172	186	22	295
Bagot	28.9	3.4	25.0	183	199	27	282
Carberry EC	27.0	3.6	27.5	164	191	37	210
Carman	29.6	6.2	26.3	195	211	18	151
Cypress River	27.9	3.8	17.5	174	171	21	153
Glenboro	28.5	4.0	23.0	149	162	25	161
Holland	28.2	3.4	21.5	158	155	27	181
Morden	28.8	6.9	28.0	199	192	20	152
Portage EC	29.5	5.6	30.5	171	185	24	178
Rivers	26.1	6.6	33.4	161	204	96	285
Shilo	26.6	4.8	24.3	161	188	92	190
St. Claude	28.9	6.2	25.1	174	188	22	153
Treherne	28.6	4.5	15.9	167	181	21	153
Wawanesa	28.0	4.7	20.7	169	197	60	186
Winkler	29.4	4.1	47.9	216	208	19	135

For more Manitoba weather information, visit: www.gov.mb.ca/agriculture/weather

Crop Progress

- Most of the potato fields are doing well. There is a wide range of emergence, from ground crack in late planted fields to well established stands.
- The frequent rains have prevented wet fields from drying down and caused minor flooding conditions in some fields. Most well drained fields appear good.
- Over 85% of the fields have good stands or > 50% emergence by June 16. Many of the late planted fields have no emergence yet or are just at ground crack stage.
- Hilling operations and other ground operations including dam/diking and herbicide applications are going on in many areas. In some moist to wet fields, ground operations have been slow to start.
- Plant heights range from <1 inch to >12 inches in early planted fields. Some fields are at 75% ground cover between rows. (Fig. 5 a,b) .
- Warm days and cool nights are favorable for tuberization, especially with good soil moisture. Tubers range from tuber initials to about over 2-inch size in early planted yellows and Ranger Russets.
- Strong winds in the last few days have lead to minor leaf injury and also sand blasting of new sprouts, especially in sandy areas (Fig.6 a,b).
- Thunderstorms, often accompanied by hail, have been frequent (almost weekly) but so far have caused only minor foliar damage in potatoes.
- Seed sprouts with symptoms which appear typical of glyphosate injury were reported from some more fields; this suggests possible herbicide exposure in different fields on mother plants in 2023 (Fig. 7a). Multiple sprouts from an eye could indicate that the mother plants had late season exposure of low dose of glyphosate (Fig.7b).



Fig.5. Good crop stand in early seeded fields have >12 inch plants and nearing row cover. Photo a: George Moir (Marginet Farms), photo b: Tavis Mangin (Simplot Foods).



Fig. 6.a) Strong winds cause severe foliar injuries Photo: Janelle Lavich (Choice Ag), b) sand blasting on young plants and sprouts. Photo: Orla Sheridan (Shilo Farms).



Fig. 7. a) Minor incidences of seed sprouts with symptoms appearing to be typical of herbicide injury Photo: Vikram Bisht (Manitoba Agriculture), b) Glyphosate exposure on mother plants affects daughter tuber sprouting. Photo: Greg Dyck (CropCheck)

Disease & Insect Pests Monitoring

- The 0-30 soil profiles in many areas are still wet (based on field capacity), the soil surface in many fields appears to have dried and crusted due to strong winds. While in other areas, frequent rains have created soaking wet spots in poorly drained fields or compacted headland areas.
- Strong winds have caused sand blasting of potato sprouts and young plants, causing micro-injuries which are prone to black dot. Fungicides targeting black dot disease would be helpful soon after sand blasting.
- Frequent rain events, created the wet soils which favour high moisture loving diseases like soft rot and *Pythium* leak. *Pythium* species were isolated from last week's infected tubers.
- Suction and pan traps for aphid monitoring have been set up in eight seed potato fields across Manitoba. Regular weekly monitoring will be done in fields with good top growth. In 2023, Green peach aphids (GPA) and Potato aphid (PA) populations were very high towards end of August. High GPA and PA levels carry the risk of higher transmission of PVY mosaics.
- Overwintering adults of Colorado potato beetles (CPBs) have become active in southern Manitoba, and are now multiplying (Fig. 8a). Egg masses at various stages of development have been seen (Fig. 8b). Scouting for infestation and multiplication is helpful in determining the timing for foliar insecticides if needed.
- Cull piles have been reported in some areas (Fig. 9). It is important to manage the cull piles for management of late blight risk, CPBs and other pests.



Fig. 8. a) Overwintering adults of Colorado potato beetle (CPB) have become active in southern Manitoba. b) Colorado potato beetle egg masses. Photos: Vikram Bisht (Manitoba Agriculture).



Fig. 9. Cull piles have been reported in some areas. In some, fully grown plants can be seen.

Late Blight Monitoring

Information

- Late blight risk forecasting has begun. Late blight disease Risk Values DSVs are cumulative numbers starting from June 1. DSVs are provided on a regional basis. Please refer to the risk maps on [Late Blight \(mbpotatoes.ca\)](http://mbpotatoes.ca). The late blight Disease Severity Values (DSVs) represent the potential risk of late blight occurring when the inoculum is present. **Current DSV numbers indicate low risk of late blight in Manitoba.**
- Fields nearing row closure will benefit from having at least one late blight protectant fungicide before row closure.
- As in earlier years, a network of 15-16 passive Spornado traps for late blight spores, across Manitoba have been established. Spore trapping is another tool-in-the-box of late blight management. Spore trapping does not replace in-field scouting, especially in low lying and wind-protected areas in the fields..
- The first round of cassette collections from the spore traps will be on Monday, June 24.
- Cull piles should be safely disposed of to reduce risk of disease and insect spread to nearby fields.
- Anyone interested in joining the spore trap network is welcome, especially those who make fungicide recommendations for late blight management on the farms. To place new orders for Spornado spore trap cassettes please contact Vikram Bisht or Sporometrics.
- Late blight risk maps, P-Days, and SprayCast maps will be available at <http://www.mbpotatoes.ca/index.cfm>.

Growers and industry stakeholders, please report or submit for diagnosis, any disease or insect observations of importance. If you suspect late blight in your area, please contact vikram.bisht@gov.mb.ca, or 204-745-0260