

Issue 4 – June 8, 2023

Manitoba Potato Report



Weekly Provincial Summary

- Above normal temperatures (10-12°C warmer than last year at the same time) and lack of rains up until first week in June are the highlights weatherwise so far.
- Planting for the province is over 99% complete.
- Ground operations – hilling, herbicide application, and dammer-diking are continuing.

Overview

- Potato planting is almost complete. Despite delays, potato planting in Manitoba is expected to finish by the end of this week, June 9 compared to June 18 in 2022.
- Planting in the western and central potato areas of the province is 100% complete. The southern part of the province is almost done too.
- Just over 50% of fields have 50% or over emerged plants across the province.
- There are reports of early and active feeding of young emerged plants by Colorado potato beetle adults.
- Regular weekly reports and other features will also be available at <http://www.mbpotatoes.ca/index.cfm>.

Ag Weather Data

Precipitation and Soil Moisture

- There have been scattered rains in the province, but most potato growing areas did not get much. Precipitation (mm) since May 01 to June 4 has been significantly low and 20-40% of the normal in the potato growing areas of the province. (Fig. 1, Table 1).
<http://www.gov.mb.ca/agriculture/weather/pubs/percent-normal-precipitation.pdf>
- Lack of rains is leading to drying of 0-30 cm soil depth in many areas and was rated optimal to very dry in potato growing areas by June 4 (Fig. 2).
<https://www.gov.mb.ca/agriculture/weather/pubs/soil-moisture-30cm.pdf>
- Some rains are forecast in the coming few days but hot weather continues. The long-term forecast is for a warm growing season.

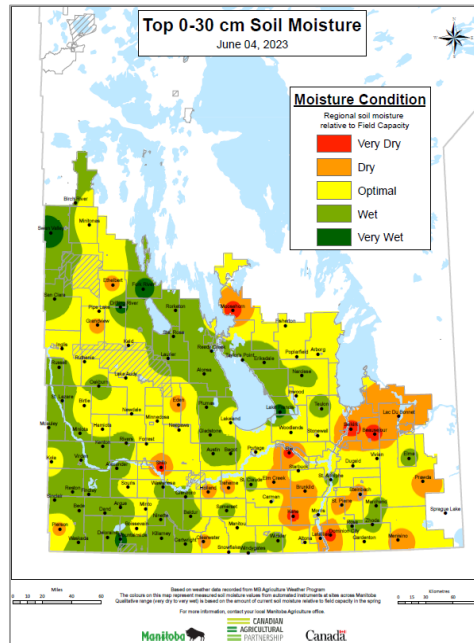
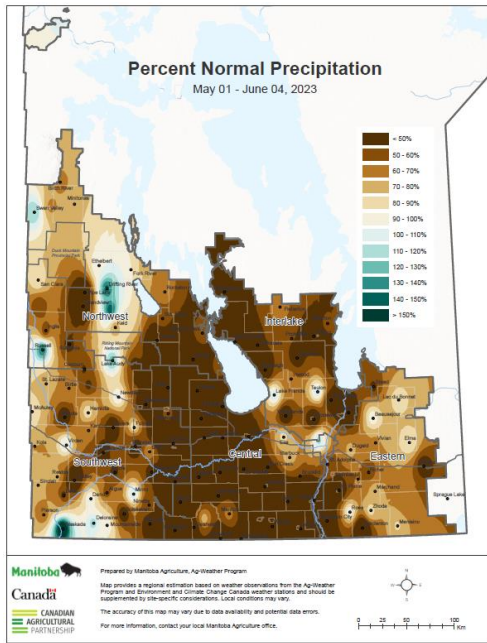


Fig. 1. (far left) Rainfall (mm) in May to early June continues to be much below normal.

Fig. 2. Soil moisture (0-30 cm depth) by mid-May is optimal to very dry in potato growing areas of Manitoba.

Temperatures – Air & Soil

- In the potato growing areas, daytime high (max) temperatures for the week (May 29 - June 4) were close to 32-34°C, while the minimum temperatures 11-12°C (Table 1). The daytime highs were around 10-12°C warmer than the same week in 2022.
- The GDD (Growing degree days with base 5°C) still is >125% above normal, indicating we have a hotter start to the season. The crops without irrigation may soon show stress.
- As in last week, Winkler and Treherne had cooler (15°C) soil temperatures at 5 cm depth, while other selected sites, like Carberry and Carman warmed up substantially (~25°C) (Fig. 4).

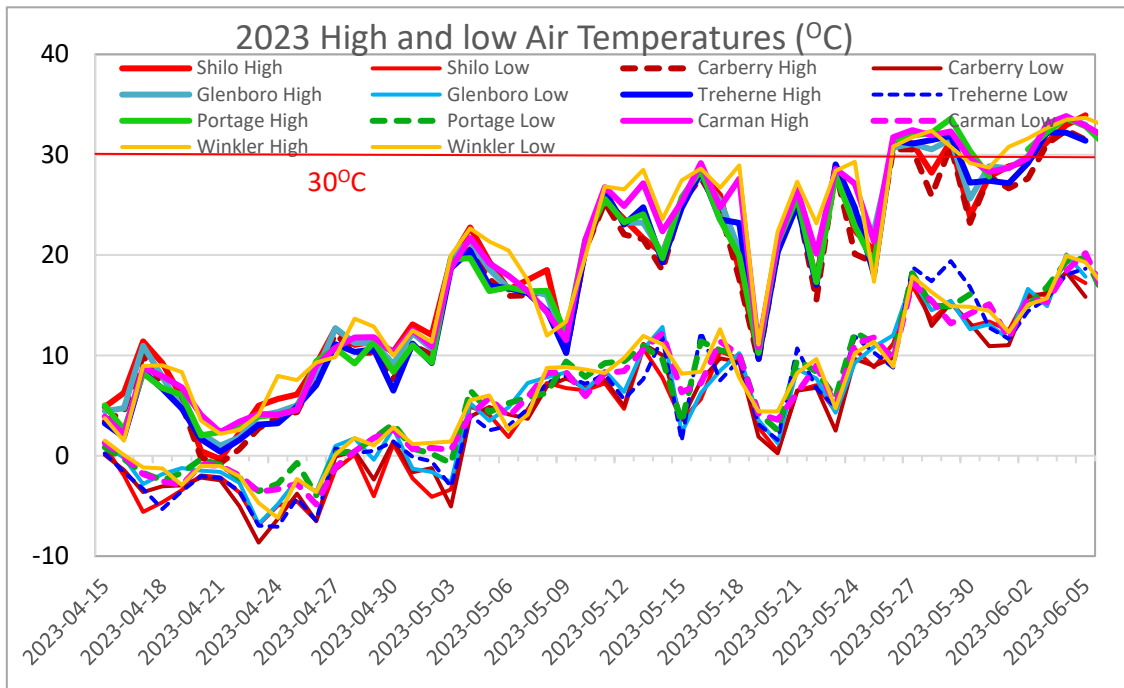


Fig. 3. High & Low Air Temperatures (May 1-June 4) across Manitoba continue to become warmer.

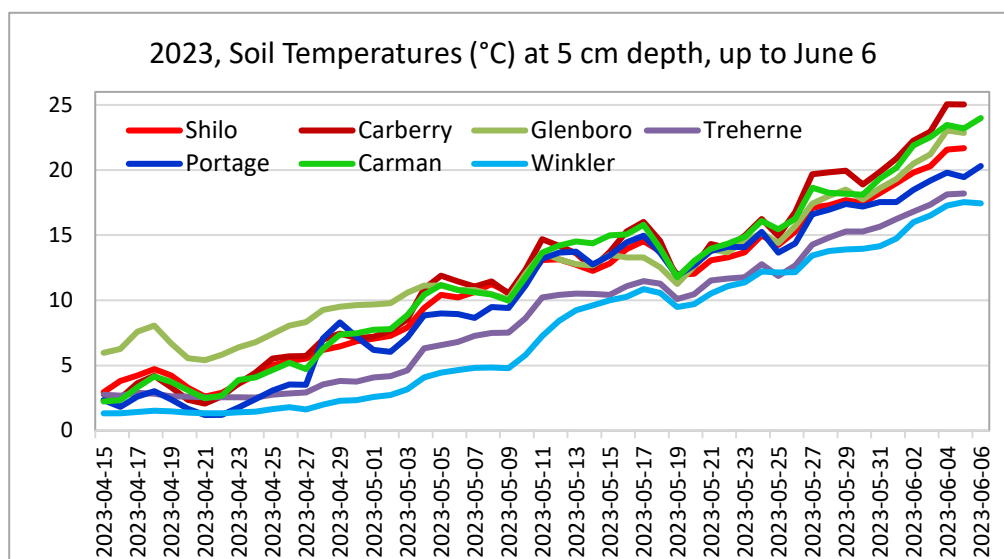


Fig. 4. Soil temperatures by June 4 have continued to warm up and nearing 25°C in Carberry and Carman.

Weather Data Summary for Selected Potato Site Stations

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

Table 1. Manitoba Ag Weather Data – May 29 to June 4 for selected potato growing areas.

| Region | Max Temp (°C) | MinTemp (°C) | Rain (mm) for the week | Rain (Since May 1) (mm) | 2023 Rainfall (% of normal) from May 1 |
|---------------|---------------|--------------|------------------------|-------------------------|----------------------------------------|
| Altona | 33.5 | 11.4 | 3.2 | 13 | 20 |
| Austin | 32.4 | 12.3 | 5.2 | 15 | 26 |
| Bagot | 32.7 | 11.3 | 3.0 | 21 | 35 |
| Carberry EC | 33.6 | 11.5 | 7.1 | 19 | 32 |
| Carman | 33.9 | 11.7 | 5.5 | 17 | 28 |
| Cypress River | 34.3 | 11.7 | 2.7 | 17 | 25 |
| Glenboro | 33.6 | 11.6 | 1.3 | 14 | 22 |
| Holland | 33.5 | 10.6 | 1.3 | 16 | 23 |
| Morden | 34.0 | 12.7 | 2.1 | 21 | 32 |
| Portage EC | 31.9 | 11.9 | 0 | 19 | 33 |
| Rivers | 32.4 | 11.8 | 5.1 | 17 | 34 |
| Shilo | 33.9 | 12.5 | 26.6 | 42 | 71 |
| St. Claude | 32.7 | 12.4 | 4.1 | 22 | 34 |
| Treherne | 32.2 | 11.7 | 5.5 | 20 | 31 |
| Wawanesa | 34.0 | 11.6 | 3.1 | 25 | 43 |
| Winkler | 33.7 | 12.3 | 4.5 | 19 | 28 |

Agronomics

- Planting operations are nearly complete and are over 99%.
- Just over 50% of fields are showing $\geq 50\%$ emerged plants. Almost all fields in Western MB have over 50% emergence, while other areas have 25-50% fields with 50% emergence.
- Hilling and pre-emerge herbicide applications and dammer-diker operations are ongoing.
- Lack of rain is drying out 0-30 cm soil depth in some areas, though still rated optimal to very dry in potato growing areas.
- Lack of rainfall and hot day time temperatures are heating up the soil surface. A soil temperature of 45°C was recorded at 1 inch depth while it was 26°C at 6 inches, in one of the potato fields. The hot soil surface has resulted in heat stress or damage to the emerging sprouts (Fig. 5 a,b,c).
- Hot and dry hills (Fig. 6) need irrigation soon, or else heat injury on sprouts is more likely.
- Hot and dry soils have desiccated some seed pieces which would normally have “melted” due to bacterial rotting.



Fig. 5 a,b,c. Hot soil surface (45°C) has resulted in damage to emerging plants or sprouts. Photo courtesy: a: Scott Graham (Simplot), b: Andrew Doerksen (Beaver Creek Farms), c: Steve Saunderson (ChoiceAgri).



Fig. 6a. Hot and dry hills make the sprouts more prone to heat injury.

Fig. 6b. Irrigation is being applied to cool down the soil surface. Photos courtesy: Leon Jarvis (Simplot).

Crop Progress

- By first week in June over 50 % of fields have over 50% plants emerged. It is estimated that by June 2 about 50% of the Manitoba fields had 50% emergence. The first crop emergence was reported May 22.
- Western potato areas are reporting almost all fields with around 50% emergence. Other areas with later planting have 25% fields with 50% emergence.
- Good plant stand and hooking in early planted fields (Fig. 7 a,b,c).



Fig. 7 a,b. Good plant stands in early planted fields, c. hooking in May 2 planted Russet Burbank plants. Photos courtesy: 7a: Kurtis McKee (JP Wiebe Farms), 7b,c: Orla Sheridan (Shilo Farms).

Disease & Insect Pests Monitoring

- Very minor incidences of Rhizoctonia infected sprouts have been reported.
- Verticillium early dying survey will be conducted in selected fields across Manitoba.
- Colorado potato beetles (CPB) are showing up early, and in high numbers at some locations. Adult feeding on newly emerged plants has also been reported from southern parts of Manitoba and western areas (Fig. 8 a,b). Up to 14 CPB adults on a plant was reported from a field. Early monitoring for CPB eggs and larvae may be needed for effective control.
- Aphid monitoring suction traps are being set up in seed fields.



Fig. 8 a,b. Colorado potato beetles showed up early and in high numbers in some fields. Photos courtesy: a. Gord Penner (Kroeker Farms), b. Harrison Loewen (KR CropCheck).

Late Blight Monitoring

Information

- Late blight risk forecasting will be provided on a regional basis. Please refer to the risk maps on www.mbpotatoes.ca.
- Late Blight Monitoring will occur again this year with weekly updates when plant stage and conditions are optimum for disease transmission.
- As in earlier years, there will be a network of passive traps for late blight spores, across Manitoba. Anyone interested in joining the spore trap network is quite welcome, especially those who make recommendations for late blight management on the farms. **Sporonado spore trap cassettes have been distributed to the cooperators.**
- If you suspect late blight in your area, please contact vikram.bisht@gov.mb.ca