

Issue 8 – July 6, 2023

Manitoba Potato Report



Weekly Provincial Summary

- The week was warm again, with temperatures up to nearly 34°C in places. Scattered rains in most potato growing areas. There were reports of hail damage too.
- Crops are being regularly irrigated where needed.
- Early protective fungicide applications before row closure is in full swing.

Overview

- Crop is growing well and appears to be a week ahead of last year.
- Temperature highs peaked at nearly 34°C in some south-east Manitoba stations.
- Scattered rains and thunderstorms with hail reported on June 27th.
- No late blight spores were trapped at any of the 17 sites from spore trap network. So far, the late blight risk values (DSVs) are low. A few European corn borers were trapped last week. Low levels of aphids are starting to show up in potato fields.
- 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 were scattered rains and thunderstorms June 26 to July 3 in the province, ranging from lows of 3.5 mm in Altona, Carberry, Morden to higher amounts in Carman, Winkler (47mm) and even higher in Glenboro (59 mm) and Shilo (76 mm) (Table 1). These scattered rains have brought many of these potato areas to higher soil moisture levels.
- In spite of these rains, ranging from 3.5 to 76mm, many potato areas are still close to 50% of normal precipitation. Carberry (75%), Glenboro (89%) and Wawanesa (95%) are inching closer to normal; while Rivers and Shilo continue to be above normal for rains so far (Table 1, Fig. 1). <http://www.gov.mb.ca/agriculture/weather/pubs/percent-normal-precipitation.pdf> .
- Recent rains have reduced the areas under “dry” category at 0-30 cm soil depth in many areas in Manitoba to the optimal category (based on Field capacity of the soils) (Fig. 2). <https://www.gov.mb.ca/agriculture/weather/pubs/soil-moisture-30cm.pdf>
- There is a forecast for cooler temperatures and some rains in the coming few days.

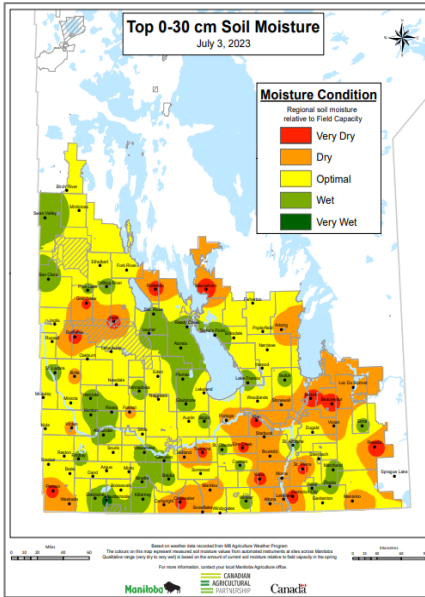
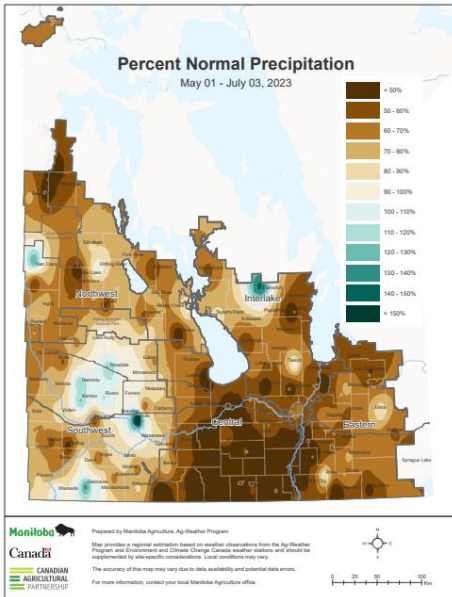


Fig.1.(far left) Rainfall (mm) in May to early July continues to be much below normal in much of potato growing areas, except a few sites in western Manitoba.

Fig. 2. Soil moisture (0-30 cm depth) by early July has become generally drier, but ranges from wet to very dry in potato growing areas. Crop water demand for potatoes has increased.

Temperatures – Air & Soil

- In the week, most of Manitoba potato growing areas had hot daytime (max) temperatures ranging mostly in low 30s°C. The overnight minimum temperatures were similar to last week’s, being mostly in 9 to 13°C range (Table 1).
- The P-Days (Potato Days with base 7°C) has reached 270 in many potato areas (www.mbpotatoes.ca) by July 5. The P-Days range from 100% above normal around Winkler to 120% in the western potato areas - indicating Manitoba has enough heat units for the potato crop (Fig. 3).

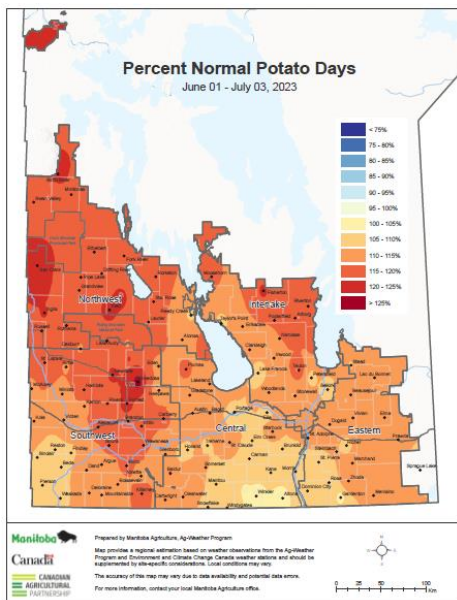


Fig. 3. Accumulated and Potato Heat Units (P-Days) as % of normal has now gone done to 100 – 120 % of normal in the potato growing areas.

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 – **June 26 to July 3** for selected potato growing areas.

Region	Max Temp (°C)	Min Temp (°C)	Rain (mm) for the week	Crop Water Demand this Week	Rain (Since May 1) (mm)	Crop Water Demand June 1- 26	2023 Rainfall (% of normal) from May 1
Altona	30.7	13.3	3.8	-	36	-	23
Austin	33.3	13.1	38.8	30.8	89	79.5	64
Bagot	32.8	13.0	24.5	31.5	74	83.0	53
Carberry EC	31.9	10.2	3.5	24.4	94	66.1	75
Carman	32.5	12.9	47.0	25.5	74	74.5	51
Cypress River	31.9	10.7	40.1	-	83	-	53
Glenboro	30.9	10.3	59.2	24.5	124	69.2	89
Holland	32.1	10.5	36.9	32.7	81	84.4	52
Morden	33.9	14.4	3.8	-	40	-	25
Portage EC	32.0	13.9	33.6	32.9	61	91.8	44
Rivers	29.9	8.5	23.5	25.1	139	69.3	111
Shilo	31.2	10.4	76.1	28.9	218	72.9	164
St. Claude	31.4	13.5	49.1	29.0	82	80.9	56
Treherne	32.5	10.8	12.8	33.3	42	83.1	29
Wawanesa	31.8	10.9	7.3	25.1	126	65.6	95
Winkler	31.9	13.0	47.4	26.0	82	75.2	53

* Crop Water Demand: [cwd \(mbpotatoes.ca\)](http://mbpotatoes.ca)

Agronomics

- In this week, June 26-July 3 and 2 days since – there have been scattered rains across Manitoba. Herbicide applications are ongoing in later planted fields. Some fields are showing mottling due to post emergence metribuzin+rimsulfuron herbicides application when hot. Rimsulfuron can cause mottling when the conditions are stressful for plant growth.
- Crop water demand (CWD) for the week was generally met by the rainfall in the week for many potato growing areas in Manitoba (Table 1). Supplemental irrigation is needed in most production areas.
- Supplemental irrigation and fertigation is being performed in many more fields.

Crop Progress

- The plant stand and crop growth looks good across the province. Early planted Russet Burbank fields are now flowering (Fig 4 a) and have good sets. However, early June and late June hot days have led to a few incidences of heat runners in some fields (Fig 4b). The number of heat runners are much fewer than in 2022.
- Many fields have full canopy cover, and the within canopy microclimate allows the Botrytis spp. to infect and sporulate on lower leaves touching the wet/moist soils. Less frequent irrigation by higher volume should be better than frequent and low volume irrigation in keeping the microclimate drier.

- Tuber formation is at different stages – from yet to produce initials to >3” size. This is the time to maintain good soil moisture to maintain high yield potential.
- There was a band of thunderstorms on June 27 again after June 21, which caused hail damage in a few fields in Carberry and Melbourne. Damage appeared to be minor.

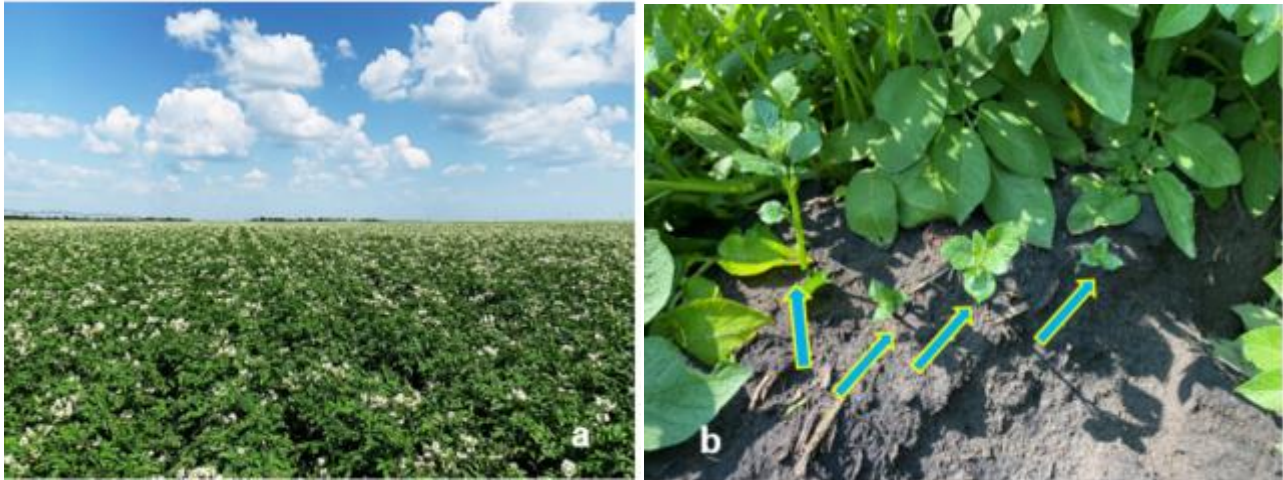


Fig. 4a: Good plant stands and row closure in early planted fields. Photo: Mitch Wright (McCain Foods); b: Heat runners making new plants. Photo: Vikram Bisht (Manitoba Agriculture).

Disease & Insect Pests Monitoring

- Minor incidences of blackleg and wilting of emerged plants continue to be reported (Fig. 5a)
- Early blight is increasing in quite a few Ranger's fields, and *Alternaria solani* spores are being trapped by passive spore traps.
- Normally, around 300 P-day value (potato heat units) protective fungicides for early blight control are recommended. It is currently around 270 P-day value in most potato growing areas ([P-Days mbpotatoes.ca](http://mbpotatoes.ca)). However, with increasing early blight on Rangers, and the between-row canopy closure expected soon, it is time to have some fungicide coverage in the lower canopy.
- Colorado Potato Beetles (CPB) newly emerged larvae are being reported from southern potato growing areas of Manitoba (mainly) and fewer incidences from other parts of Manitoba. Monitoring for CPB eggs and larvae may be needed for effective control (Fig 6a).
- Wireworm was reported from another location in western Manitoba in newly formed tuber, and this could be of concern for Manitoba.
- Aphid monitoring suction trap catches still show a low population, and no Green Peach Aphid or Potato Aphid have been recovered (Table 2). Some virus infected plants (Fig 5b) in or near a seed fields can be sources of virus inoculum when aphids are present. Virus infected plants are often short, and with smaller & crinkly leaflet as compared to healthy plant leaf – differences are easily seen on cloudy days or when shaded.
- Potato leafhoppers (PLH) are being reported in large numbers from many hosts, including apple trees (Fig. 6 b). But the catches on potatoes have been low to none so far. There could be a surge in potatoes leading to hopper burn if the PLH move to potatoes.



Fig. 5a: Minor incidences of blackleg continue to be observed in some fields. b: Virus infected plants are often short, and with smaller & crinkly leaflet as compared to healthy plant leaf. Photos: Vikram Bisht (Manitoba Agriculture)

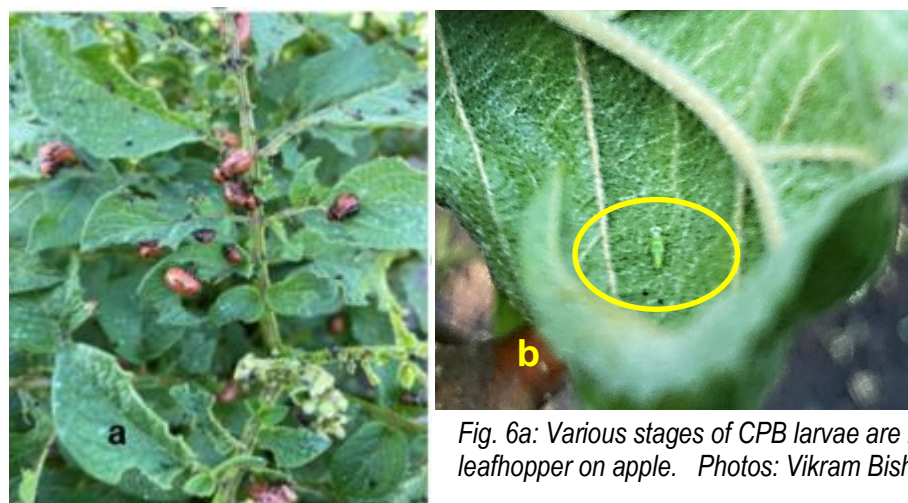


Fig. 6a: Various stages of CPB larvae are now seen in many fields. b: Potato leafhopper on apple. Photos: Vikram Bisht (Manitoba Agriculture).

Table. 2. Weekly Aphid Report – Week 2 (June 26-July 3) 2023

Field #	Town	RM	Green Peach Aphid	Potato Aphid	Other Aphids	Total *	AL H	P L H	Comments
Southern Region									
Field 1, H-20-2	Winker	Stanley	-	-	-	-	-	-	No sample
Field 2, K-16-6	Carman	Dufferin	0	0	2	0	0	0	Some thrips
Field 3, S-29-2	Winkler	Rhineland	-	-	-	-	-	-	No sample
Central Region									
Field 4 J-9-6	Swan Lake	Victoria	0	0	1	1	0	0	Lots of lacewings
Field 5 J-25-3	Glenora	Argyle	0	0	3	3	0	0	Soldierflies, lots of thrips
Field 6 M-32-13	Westbourne	Portage La Prairie	0	0	0	0	0	0	Some thrips

Western Region

Field 7, A-12-14	Wellwood	North Cypress- Langford	-	-	-	-	-	-	No sample
Field 8, SP	Carberry	North Cypress- Langford	0	0	0	0	0	0	

* The aphid counts are a summation from a suction trap and two pan traps in a field.

** Suction fan may not be working.

ALH = Aster leafhopper, PLH = Potato leafhopper.

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. Currently, due to warm and dry conditions, the 7-Day Disease Risk values are very low.
- A network of 17 passive Spornado traps for late blight spores, has been set up across potato growing areas of Manitoba to provide early warning of possible late blight risk. Early blight (*Alternaria solani*) spores are also checked at some sites.
 - No late blight spores were detected in the samples processed in the 3rd week of collection (June 26 to 30).**
 - PCR testing for early blight (*Alternaria solani*) spores was positive for some more sites this week, suggesting that risk of early blight infections is increasing.

Third week's (June 26-30) PCR test results for presence of *Phytophthora infestans* (Pi) late blight spores are negative at all sites submitted (Table 3). Early blight disease and *Alternaria solani* spores were recorded in some more sites.

Table 3: *Phytophthora infestans* spore trapping and PCR results **Week 3 (June 26-30).**

Spore Trap Locations	Pi spores	Early blight (spore #s)	Comments
Shilo - OS	Negative	Positive (2189)	Early blight seen
Wawanesa -SG	Negative	Negative	Early blight seen
Douglas – MW	Negative	Positive (1140)	Early blight seen
Wellwood / Carberry North-SS	Negative	Positive (1490)	
Field 35A-Carberry N -SS	Negative	Negative	
Carberry N – AU	Negative	Positive (3950)	
Carberry South - MW	Negative	Positive (1160)	
Carberry North - MW	Negative	Negative	
Brookdale – KJ	Negative	Positive (1750)	
Cypress River - SG	Negative	Positive (606)	
Melbourne - SG	Negative	Positive (2250)	Early blight seen
Treherne - JG	Negative	Negative	
Portage - HB	N/A	N/A	
McDonald / Portage - SG/KPPA	Negative	Positive (81)	
Bagot – DM-Delta	N/A	N/A	
Carman – VB/AB	N/A	N/A	
Winkler /TSC	Negative	Positive (6220)	

Please mark your calendar to attend “Herbicide Injury to Potato and Rotation Crops” field demonstration: July 21, 2023, 9:30 – 11:30 AM, Carberry MCDC offsite Research Plots



If you suspect late blight in your area, please contact vikram.bisht@gov.mb.ca
