Issue 6 – June 22, 2023

Manitoba Potato Report

Weekly Provincial Summary

- After weeks of above normal hot and dry weather, this week brings some normal temperatures and scattered rains in most potato growing areas.
- Crops are being regularly irrigated where needed.
- Ground operations – hilling, herbicide application, and dammer-diking are continuing.

Overview

- Crop is growing well and appears to be a week ahead of last year in tuberization.
- Temperature highs have been lower than last week, and 8^{O}C cooler than last year at the same time. Thunderstorms and hail reported on June 20/21.
- Almost all fields have plant emergence at 50% or above.
- There are reports of more and more egg masses of Colorado potato beetle from a wider swath of Manitoba, but higher feeding in mostly southern potato areas of the province.
- Grasshopper feeding at the edges of potato fields has also been reported from more fields in western potato areas.
- Late blight spore trap network has been set up at 17 sites. No late blight spores were trapped.
- Regular weekly reports and other features will also be available at *http://www.mbpotatoes.ca/index.cfm*.

Ag Weather Data

Precipitation and Soil Moisture

- *Overnight scattered rains and thunderstorms June 20-21 in some areas- South West fairly good rainfall. Example: Central- Carman 9mm, Starbuck 9.8. West: Shilo, Rivers – 9mm. St Claude-11mm. This data is not included in June 12-18 weather information.*
- Precipitation (mm) since June 12-18 has been scant for most of the province, ranging from 0 to only 2.9 mm. Except for certain western Manitoba sites, most of the potato growers are still below 40% of the normal. Only Rivers and Shilo rains were closer to normal. (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 the very dry areas have increased substantially in potato growing areas by June 18 (Fig. 2). *https://www.gov.mb.ca/agriculture/weather/pubs/soil-moisture-30cm.pdf*
- There is very little rain in the forecast but cooler temperatures in the coming few days.

Report compiled by Dr. Vikram Bisht, Manitoba Agriculture
Tel. (204) 745-5660 Fax (204) 745-5690
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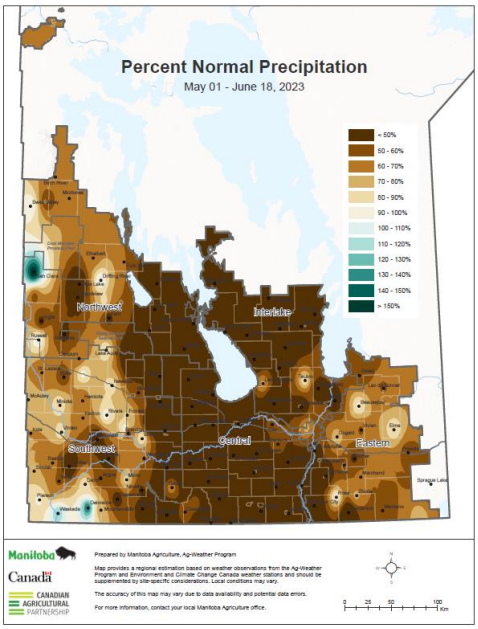

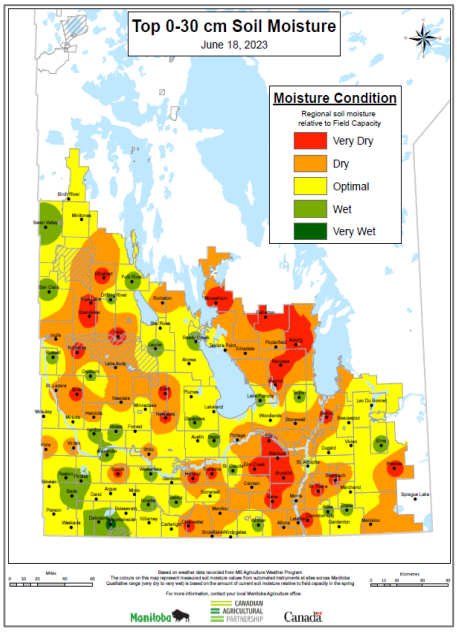

Fig.1.(far left) Rainfall (mm) in May to mid-June continues to be much below normal in much of potato growing areas, except a few sites in western Manitoba.

Fig. 2. Soil moisture (0-30 cm depth) by June 18 has become generally drier, ranging from optimal to very dry in potato growing areas. Crop water demand for potatoes has increased.

Temperatures – Air & Soil

- In the potato growing areas, daytime high (max) temperatures for the week (June 12-18) were close to 30^{O}C and cooler than last week; while the overnight minimum temperatures went down to 6.5 to 8.4 ^{O}C (Fig. 3, Table 1). The daytime highs were around 6-8^{O}C cooler than the same week in 2022. Not included in Table 1 below – Carman and Winkler maximum air temperatures reached 37 and 36.4 ^{O}C on June 21.
- The P-Days (Potato Days with base 7^{O}C) has cooled a bit to 105 to >125% above normal, indicating we continue to have a hot start to the season. The P-Day values range 150 to 160 in the potato growing areas (P-Days (mbpotatoes.ca) by June 21.

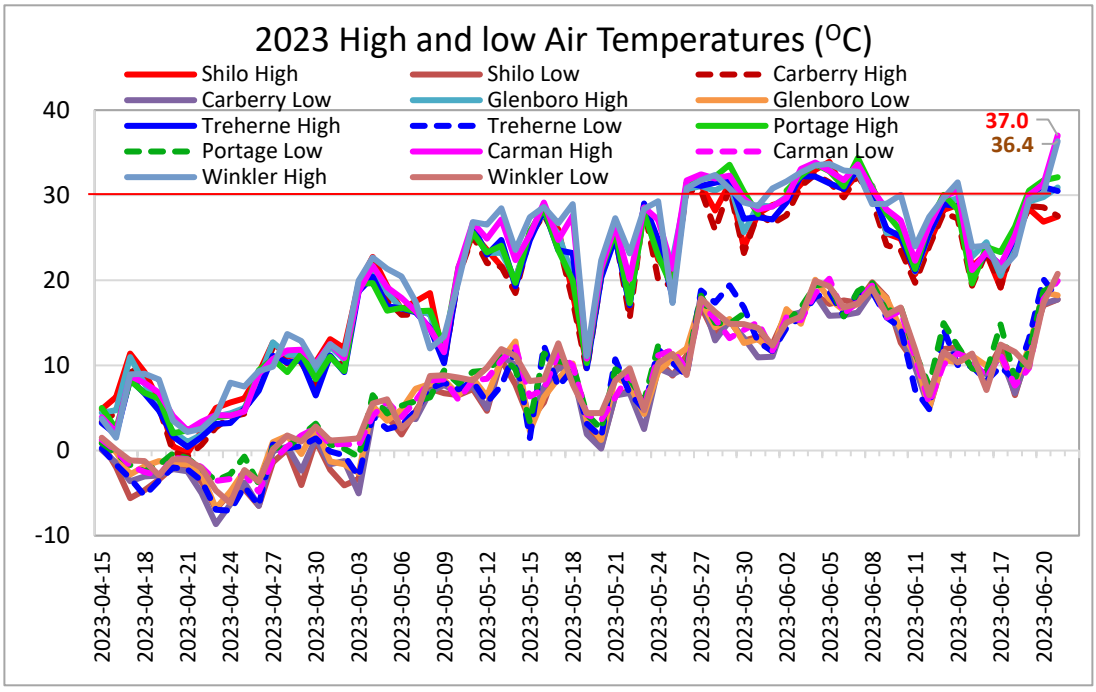

Fig. 3. High & Low Air Temperatures (May 1-June 21) across Manitoba continue to become warmer.

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 12 to 18** for selected potato growing areas.

Region	Max Temp (ºC)	Min Temp (ºC)	Rain (mm) for the week	Crop Water Demand this Week	Rain (Since May 1) (mm)	2023 Rainfall (% of normal) from May 1	Crop Water Demand June 1- 18
Altona	31.1	8.1.	0.0	-	14	13	-
Austin	29.4	8.4	2.4	14.0	22	22	**30.3**
Bagot	30.1	8.2	1.9	14.4	27	27	**32.5**
Carberry EC	29.5	7.0	0.2	12.1	34	37	**27.1**
Carman	30.6	7.6	0.2	11.7	17	18	**29.2**
Cypress River	29.7	7.2	2.9	-	23	21	-
Glenboro	29.6	8.0	3.1	12.3	25	25	**29.6**
Holland	29.3	7.9	2.6	14.1	29	27	**32.7**
Morden	31.0	8.2	0.0	-	21	20	-
Portage EC	29.0	6.8	0.0	15.6	23	24	**36.4**
Rivers	27.6	7.9	0.0	**11.2**	82	**96**	**28.5**
Shilo	28.8	6.5	0.0	11.9	84	**92**	**29.2**
St. Claude	28.8	8.0	0.1	13.6	22	22	**31.1**
Treherne	30.1	8.2	0.6	14.4	21	21	**31.1**
Wawanesa	30.0	6.6	1.2	11.1	55	**60**	**26.5**
Winkler	31.5	7.1	0.0	11.4	21	19	**28.6**

Agronomics

- The crops without irrigation are showing stress. Most process fields are being irrigated.
- Hilling and pre-emerge herbicide applications and dammer-dike operations are ongoing in later planted fields.
- Irrigation started two weeks ago and is ongoing in a big way in most potato areas.
- Weekly rainfall is not meeting the Crop Water Demand (CWD) (Table 1) and supplemental irrigation is needed in most production areas.

Crop Progress

- The plant stand and crop growth looks good across the province. Almost all fields have 50% emergence, and it is estimated that the crop is around 4 days ahead of the 4 year average and about 7 days ahead of 2022. Warm soils with fair soil moisture early in spring at planting played a part in quicker emergence in 2023!
- Good plant stands can be seen in many fields. Some early planted fields have full ground cover between rows (Fig. 4a), while early June planted fields are just showing emergence (Fig. 4b).
- In late May planted fields, plant canopy within rows is starting to touch. This would be a good time for protective fungicide application for coverage of lower foliage.

- Tuber formation is at different stages – from yet to produce initials to 1" size. (Fig. 5a, b). Early planted fields (mostly in the western side of the province) are showing good tuberization. This is the time to maintain good soil moisture to maintain high yield potential.
- Early June hot days have led to a few incidences of heat runners in some fields (Fig. 6).
- There was a band of thunderstorms on June 20/21, which caused hail damage in a few fields in Sydney, Melbourne, Bagot and McGregor (Fig. 7a, b, c). Damage appeared to be severe in spots. Since these plants were in tuber initiation or early tuberization – the fields are expected to recover but may be delayed a bit. Hail-hit area is estimated to be over 1000 acres.

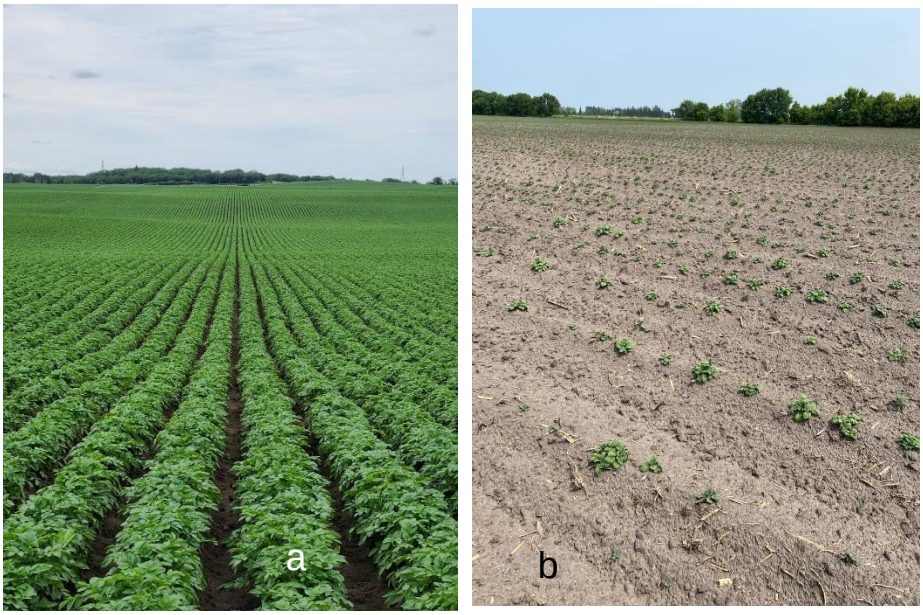

Fig. 4.a: Good plant stands and row closure in early planted fields Photo: Kurtis McKee (JP Wiebe Farms), and b: Late May/early June planted field. Photo: Harrison Loewen (KR CropCheck).

Fig. 5 a,b. Good tuberization and size in early planted fields. Photo a: Tavis Mangin (Simplot). b: Orla Sheridan (Shilo Farms).

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Fig. 6 a,b,. Runners showing up in some fields. Photo a: Greg Dyck (CropCare); b: Kurtis McKee (JP Wiebe Farms),

Fig 7 a,b,c. Hail damage in Sydney and MacGregar area. a: Kurtis McKee (JP Wiebe Farms), b, c: Andrew Doerksen (Beaver Creek Farms)

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Disease & Insect Pests Monitoring

- Surprising to find early blight this early in the season in western part of Manitoba, even with such hot and dry conditions (Fig. 8). Normally, early blight shows up around 300 P-day value (potato heat units) and needs protective fungicides. It is currently around 160 P-day value in most potato growing areas (P-Days (mbpotatoes.ca).
- Colorado Potato Beetles (CPB) new egg masses have been reported from southern parts (mainly) and fewer incidences from other parts of Manitoba. Monitoring for CPB eggs and larvae may be needed for effective control.
- Grasshopper feeding at the edges of potato fields continues to be reported, but minor damage.
- Aphid monitoring suction traps have been set up in seed fields. **Aphid sample from only one site was received. No aphids were trapped.**

Fig. 8. Early blight on Ranger Russet. Photos courtesy: Orla Sheridan (Shilo Farms)

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.
    - **No late blight spores were detected in the samples processed in the first week of collection (Jun 12 to 19).**

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