

Severn Sound Environmental Association

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2022 Crop Heat Units and Rainfall Data Summary for Lafontaine and Midland Weather Stations

November 22, 2022

Crop Heat Units (CHU) are a method to quantify the effect of temperature on crop development. The 2022 results for Crop Heat Units and rainfall were processed by the Severn Sound Environmental Association (SSEA) using data compiled from the weather stations located in the Township of Tiny, Lafontaine and the Water and Wastewater Operations Facility in Midland, Ontario. Using daily maximum and minimum temperatures, CHU accumulation was calculated by following Ontario's Ministry of Agriculture, Food and Rural Affairs, Agronomy Guide for Field Crops.

The 2022 CHU results for the Lafontaine station showed an increase compared with 2021, from May through to November. Overall, the 2022 accumulated CHUs ended higher by 384 units. The CHU count for the 2022 growing season, totalled 3480. Based on the data, the first killing frost in 2022 occurred on November 13, three days earlier than last years timing.

The 2022 accumulated CHU results for the Midland station are 3743 CHUs with the first killing frost occurring on November 13, nine days earlier then last years timing. Based on the data, the crop heat units had an accumulated increase from last year of 607 units.

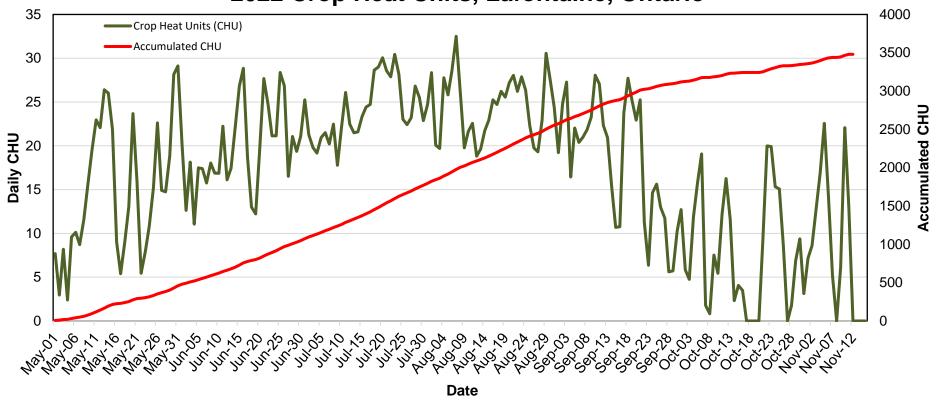
Both weather station locations recorded similar rainfall results for 2022. From May to the end of October the data shows relatively small amounts of rainfall occurring more frequently at both stations. Notable rain events with more significant amounts occurred on May 26th and August 3rd 2022 with amounts above 40mm in 24 hours occurring at the Lafontaine station. Throughout the spring and summer months weather appeared more localized with slightly higher rainfall amounts being recorded at the Lafontaine station. Over the ice free season, 2022, saw a decrease in total rainfall compared to 2021.

Graphs showing rainfall amounts are now updated monthly from May to October and can be viewed through severnsound.ca at Monitoring/Weather Stations.

For more information:

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2022 Crop Heat Units, Lafontaine, Ontario



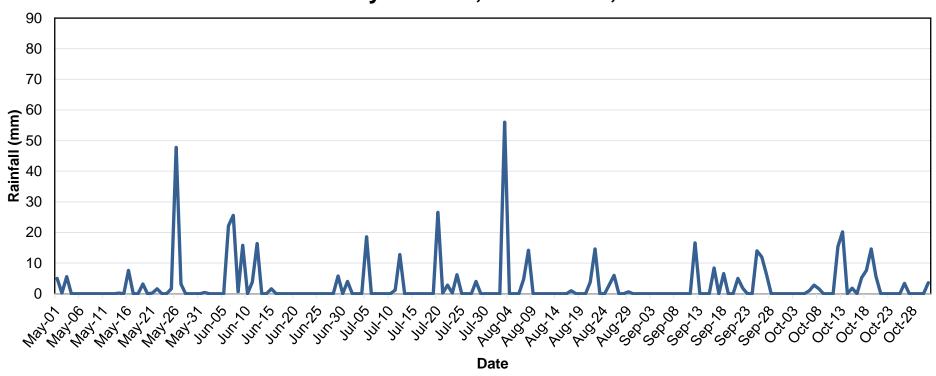
Month	Monthly Crop Heat Units	800	20	22 Mc	onthly	y Cro	р Неа	t Uni	ts
May	460	700							
June	589	nits 600							
July	746	5 500							
August	761	400 teat							
September	551	2 300 200							
October	245	²⁰⁰ ک							
November	129	100							
Total		0	May	June	July	August	September	October	November

Crop Heat Unit calculations were based on Daily Max. and Min. Air Temperatures collected in Lafontaine, at the Municipally owned property, using an ADCON weather station. Data from May 1 to November 13, 2022 (first occurrence of -2°C or lower) was used to compile the results. The calculation method can be found at: http://www.omafra.gov.on.ca/english/crops/pub811/pub811ch10.pdf (Page 254)

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2022 Daily Rainfall, Lafontaine, Ontario



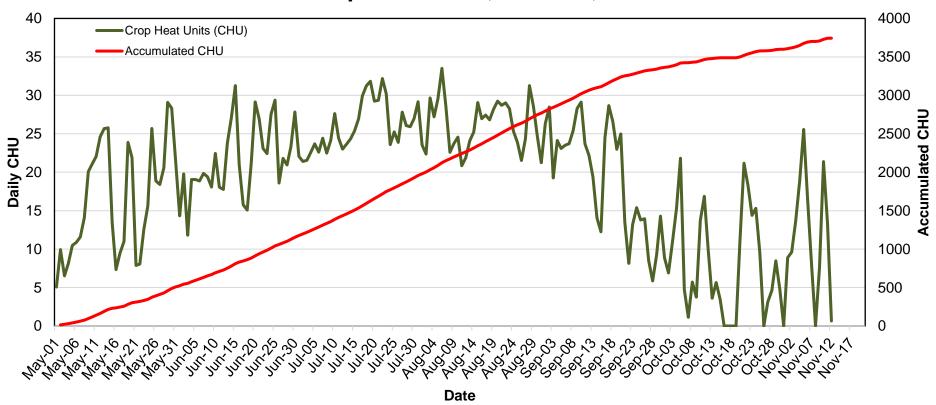
Month	Monthly Rainfall (mm)		120 100		2022 N	l onthly	/ Rainf	all	
May	76	(mm)	80						
June	92	<u>ت</u> [60						
July	77	Rainfall	40						
August	104	Ra	20						
September	71		0						
October	83		U	May	June	July	August	September	October
Total	503		- 1	Monthly	Rainfall (m	m) – A	Average I	Monthly R	ainfall

Rainfall amounts were based on continuous measurements recorded at the Lafontaine Ontario, Municipally, owned property, using a weather station equipped with a tipping bucket rain gauge. Data from May 1 to October 31, 2022 was used to compile the results.

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2022 Crop Heat Units, Midland, Ontario



Month	Monthly Crop Heat	900	20)22 M	onthl	y Cro	р Неа	at Un	its
	Units	800							
May	509								
June	644	Onits 700 600							
July	803	_							
August	812	000 Heat							
September	587	C 200							
October	243	100							
November	144	0							
Total	3743		May	June	July	August	September	October	Nove

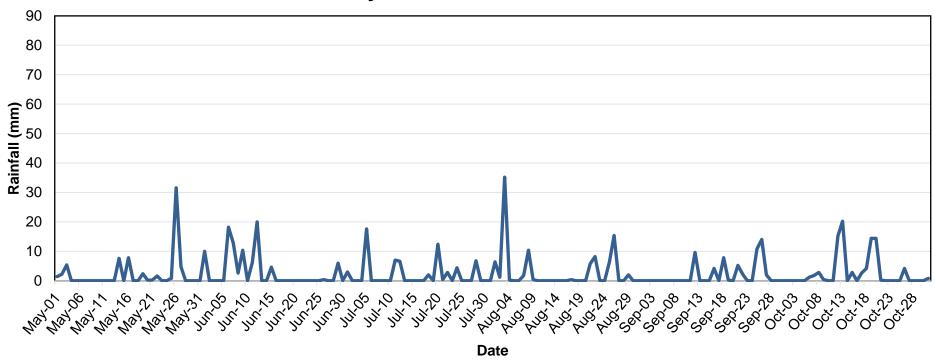
Crop Heat Unit calculations were based on Daily Max. and Min. Air Temperatures collected in Midland, at the Water and Wastewater Operations Facility, using an ADCON weather station. Data from May 1 to November 13, 2022 (first occurrence of -2°C or lower) was used to compile the results. The calculation method can be found

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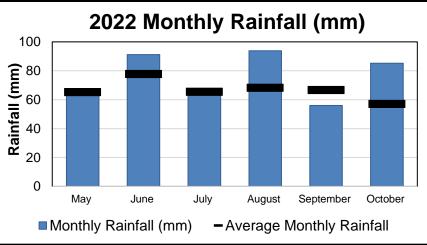
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ober November

2022 Daily Rainfall, Midland, Ontario



Month	Monthly Rainfall (mm)
May	66
June	91
July	63
August	94
September	56
October	85
Total	314



Rainfall amounts were based on continuous measurements recorded at the Midland, Ontario, Water and Wastewater Operations Facility, using a weather station equipped with a tipping bucket rain gauge. Data from May 1 to October 31, 2022 was used to compile the results.

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