



Tuesday, June 23, 2020

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## What's Growing ON? – Episode 2

**Cassandra Russell, Vegetable Crops Specialist, OMAFRA**



### Episode 2: Spotted Wing Drosophila & Weed Control in Carrots

In this episode, we are joined by Hannah Fraser, Entomologist for horticulture crops and Erica Pate, Fruit Crop Specialist for berries to introduce us to the invasive insect, spotted wing drosophila and how berry and tender fruit growers are dealing with this difficult pest. As well, we hear from Dennis Van Dyk, Vegetable Crop Specialist for root vegetables, on weed control in carrots and some existing and emerging technologies for getting rid of those pesky weeds. Plus, Ontario crop updates for June 12th, 2020.

[https://www.buzzsprout.com/1111115/4185728-spotted-wing-drosophila-weed-control-in-carrots?client\\_source=small\\_player&iFrame=true&referrer=https://www.buzzsprout.com/1111115/4185728.js?container\\_id=buzzsprout-player-4185728&player=small](https://www.buzzsprout.com/1111115/4185728-spotted-wing-drosophila-weed-control-in-carrots?client_source=small_player&iFrame=true&referrer=https://www.buzzsprout.com/1111115/4185728.js?container_id=buzzsprout-player-4185728&player=small)

Music: Aspire by Scott Holmes

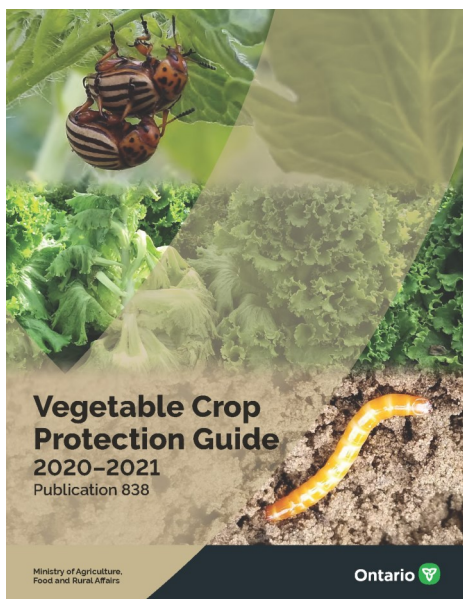
Have a question or a topic you would like us to cover? Email us at [ONhortcrops@gmail.com](mailto:ONhortcrops@gmail.com)

Click here(<https://onvegetables.com/podcast/>) for a list of previous **What's Growing ON?** episodes

### “In This Issue”

- ♦ What's Growing ON? – Episode 2
- ♦ Publication 838 Print Copy Now Available!
- ♦ GLVPN Today: Predicting Pest Pressure
- ♦ VCR – Vegetable Crop Report – June 18, 2020

## Publication 838 Print Copy Now Available!



Publications 838 – Vegetable Crop Protection Guide is now available in print, just as spray season ramps up. Order your copy for the office, spray shed and tractor at this link: <https://www.publications.gov.on.ca/300277>

Or contact the Agricultural Information Contact Centre at 1-877-424-1300 to order a copy.

## GLVPN Today: Predicting Pest Pressure



GREAT LAKES VEGETABLE PRODUCER'S NETWORK

This week's chat features Ontario's own Cheryl Trueman with the University of Guelph along with Dan Egel from Purdue and Kieth Mason from MSU. They will be discussing the tools available to vegetable growers to predict diseases and insects in their crops.

Call in at (1 647-374-4685) or join the broadcast here: [bit.ly/glvpnlive](https://bit.ly/glvpnlive)

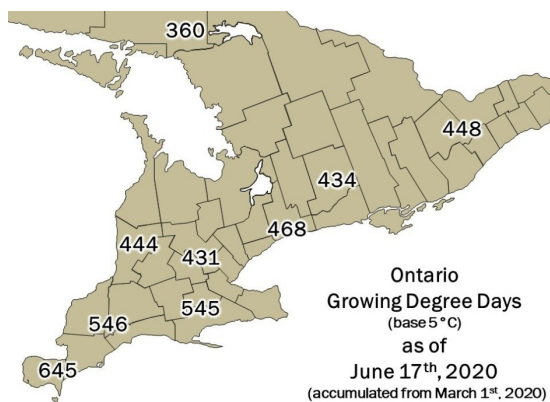
**When: every Wednesday @ 12:30**

**Where: <https://www.glveg.net/listen>**



## VCR – Vegetable Crop Report – June 18, 2020

The VCR (vegetable crop report) is a weekly update which includes crop updates, weather and growing degree summaries for various vegetable growing regions across Ontario.



**Temperature** – Temperatures are expected to rise over the weekend before returning to mid 20s in most regions towards the end of next week. Onion maggot thresholds have been surpassed in all regions except Essex which has passed the first threshold. Carrot weevil threshold has been reached in Essex county. Cabbage maggot are at threshold in Huron, Wellington, Simcoe, Peterborough, Kemptville and Sudbury. Essex, Chatham-kent and Norfolk have reached the second threshold for seedcorn maggot. Degree day data for each region is shown below.

**Rainfall** – Most regions in Ontario received little to no rain over the past week. Scattered showers and a risk of thunderstorms are forecasted for all regions throughout the upcoming week. Precipitation data for each region is shown below.

### Crop Updates

**Asparagus** – Harvest is winding down.

**Beets** – Cercospora leaf spot has been observed in field plots at Ridgetown campus. The presence of symptoms in the region coupled with the closing of the canopy indicates that preventative fungicide programs should be initiated soon, if they haven't been already.

**Brassica Crops** – Imported cabbageworm and diamondback moth larvae are active (Figure 1). Scout 5 plants in 5 locations and record the total number of each of the lepidopteran pests.

Multiply:

Diamondback moth x 0.2 = **A**

Imported cabbageworm x 0.5 = **B**

Cabbage looper x 1.0 = **C**

Then add:

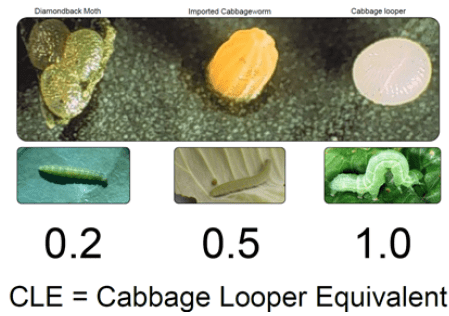
**A+B+C and divide by 25 = Cabbage Looper Equivalent**

**For cabbage the threshold is 0.3 and for broccoli and cauliflower the threshold is 0.2.**

	Diamondback Moth	Imported Cabbageworm	Cabbage Looper
Eggs	-Scale-like eggs laid in small groups	-Yellow, bullet-shaped with ridges	-round, greenish-white
Larvae	-hairless	-Green larvae, short hairs, velvet-like appearance	-inchworms with thin white line along each side
Damage	-Create windows in leaves, do not consume through leaf	-Ragged holes and dark green frass <b>not in piles</b>	-Ragged holes and dark green frass <b>in piles</b>
Relative Damage (Cabbage Looper Equivalent)	0.2	0.5	1.0



## VCR – Vegetable Crop Report – June 18, 2020...con't



**Figure 1.** Diamondback larvae have mesh-like cocoons and do not always eat through the leaf and leave a 'window' – June 16, 2020.

**Beans and Peas** – Pea harvest is well under way.

**Carrot** – Irrigation continues for most carrots as the dry conditions are difficult on the establishing crop. Growers are having a hard time getting good activation of the pre-emerge herbicides and pigweed is liking this weather. Carrot weevil is the insect of concern this week as adults are out laying eggs currently. We'll be nearing the end off the egg-laying period soon so later seeded fields might be spared the worst of the pressure.

**Celery** – Scout for early symptoms of celery leaf curl as plants establish. If aster leafhopper counts were active in past weeks keep a close eye on plants showing symptoms of aster yellows. Tarnished plant bugs are active and thresholds have been reached in all regions.

**Cucurbits** – Cucumber beetle continues to be found in large numbers (See Figure 2). Early planted commercial fields should be scouted as the efficacy of seed treatments and in-furrow insecticide applications lasts 4-6 weeks. Some transplants may have been exposed to the bacterial wilt pathogen early in the season due to high numbers of cucumber beetles. Scouts should test wilting plants for bacterial ooze in the xylem to determine if wilt is caused by this week's heat and lack of rain, or by bacterial wilt.



**Figure 2.** An abundance of striped cucumber beetles on summer squash. Stratford, June 16<sup>th</sup>.

**Garlic** – Leek moth larvae that are a little ahead of the second flight are starting to show damage. While scaping, be sure to try to look at every plant to look for anything abnormal including cuts, white spots and what appears to be sawdust. If others are scaping, be sure they know to look for anything abnormal and kill any larvae they find. If there are no larvae present but holes are observed in the scape, be sure to cut open the scape and look inside, sometimes leek moth larvae can be found inside (Figure 3).



**Figure 3.** Leek moth larvae inside scape/stalk, June 14, 2020  
– David Bianchi

## VCR – Vegetable Crop Report – June 18, 2020...con't

**Leafy Greens** – Leafminers continue to cause damage and cutworm pressure is high in some areas. Seedcorn maggot has reached it's second threshold for Essex county and poor emergence from later plantings may be due to maggot damage.

**Onions** – Direct seeded onions are reaching the 4<sup>th</sup> leaf stage in many areas and transplants are starting to take off. Scout for early thrips, especially around fields that border hay that has been recently cut. Scout for wilting and dig up suspect plants to determine if wireworms, millipedes or onion maggots are the cause. Scout for stunting caused by onion smut. Cutworms are sporadic but causing damage in some areas (Figure 4).



Figure 4. Cutworm damage on direct seeded onions – June 16, 2020

**Potatoes** – The inch of rain in most parts of the province seems like a distant memory as things dry up and irrigation continues. There are leafhoppers around as hay is being cut so scout your fields for any signs of adults or nymphs. Threshold is 20 nymphs/50 leaves or 15 adults/50 leaves. Now is the time to look for Colorado Potato Beetle eggs and hatching larvae to check how the at plant insecticide is holding up.



Figure 5. CPB eggs deposited on the underside of potato leaves while two adults lay dead on the ground, defeated by the at plant insecticide. Not this time CPB, not this time..

**Sweet corn** – Corn has been growing well. Scout in the evening for armyworm when the caterpillars are active.

**Tomatoes and Peppers** – With continued warm temperatures and little precipitation, unirrigated crops are beginning to show heat stress. In addition, some young transplants are showing signs of constriction at the base of the stem, possibly due to transplant shock/planting into hot soils. If you are seeing this or other issues in your fields, please reach out to [Cassandra.russell2@ontario.ca](mailto:Cassandra.russell2@ontario.ca). Pest pressure overall continues to be low in tomatoes and peppers.

## VCR – Vegetable Crop Report – June 18, 2020...con't

**NOTE: Data as of June 17th, 2020**

**Pest Degree Day Forecasting**

Pest	Carrot Rust Fly	Onion Maggot	Carrot Weevil	Aster Leafhopper	Tarnished Plant Bug	Cabbage Maggot	Seedcorn Maggot	European Corn Borer
THRESHOLD	329-395, 1399-1711	210-700, 1025-1515	138-156, 455+	128+	40+	314-398, 847-960, 1446-1604	200-350, 600-750, 1000-1150	See legend below
Essex*	812	725	507	399	267	572	725	353
Chatham-Kent*	699	617	425	327	188	481	617	283
Norfolk**	702	621	416	319	183	476	621	275
Huron***	569	504	343	253	135	391	504	212
Wellington**	564	493	329	244	134	377	493	206
Simcoe County***	564	495	335	250	141	384	495	212
Durham***	608	535	358	270	148	408	535	230
Peterborough	571	498	329	241	127	378	498	202
Kemptville***	585	515	341	255	140	389	515	217
Sudbury***	458	407	280	214	118	317	407	183

\*- Bivoltine region for ECB. First Peak Catch: 300-350 DD, Second Peak Catch 1050-1100 DD

\*\*-. Overlap region for ECB. First Peak Catch : 300-350 DD Second Peak Catch 650-700 DD, Third Peak Catch 1050-1100 DD

\*\*\*-Univoltine region for ECB. Peak Catch 650-700 DD

**Use these thresholds as a guide, always confirm insect activity with actual field scouting and trap counts.**

**Select a region below for the latest weather, crop and pest degree day information:**

Essex County(<https://onvegetables.com/2020/06/18/2020vcr-8/#essex>)

Chatham-Kent County(<https://onvegetables.com/2020/06/18/2020vcr-8/#chatham-kent>)

Norfolk County(<https://onvegetables.com/2020/06/18/2020vcr-8/#norfolk>)

Huron County(<https://onvegetables.com/2020/06/18/2020vcr-8/#huron>)

Wellington County(<https://onvegetables.com/2020/06/18/2020vcr-8/#wellington>)

Simcoe County(<https://onvegetables.com/2020/06/18/2020vcr-8/#simcoe>)

Durham County(<https://onvegetables.com/2020/06/18/2020vcr-8/#durham>)

Peterborough(<https://onvegetables.com/2020/06/18/2020vcr-8/#peterborough>)

Kemptville(<https://onvegetables.com/2020/06/18/2020vcr-8/#kemptville>)

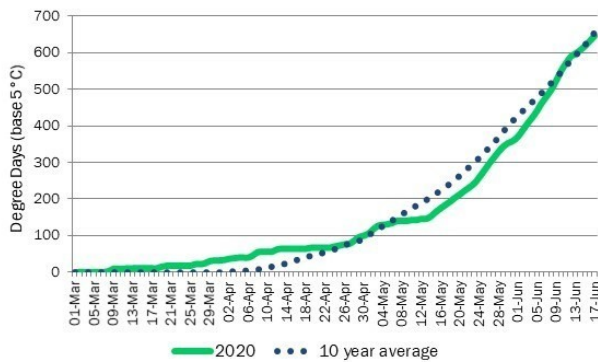
Sudbury(<https://onvegetables.com/2020/06/18/2020vcr-8/#sudbury>)



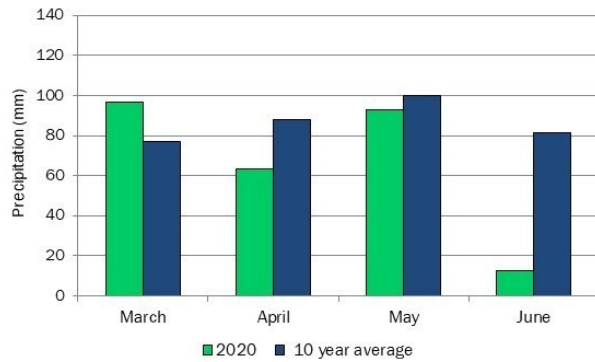
# VCR – Vegetable Crop Report – June 18, 2020...con't

## Essex County

Essex Growing Degree Days

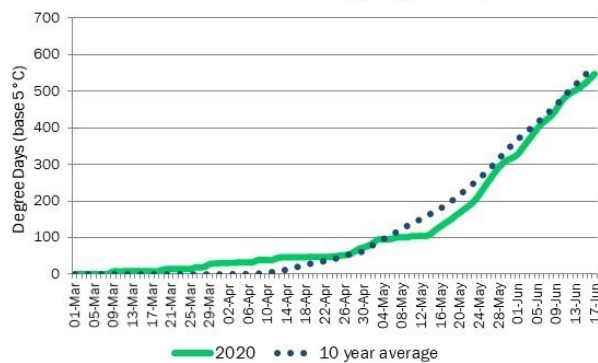


Essex Total Precipitation per Month

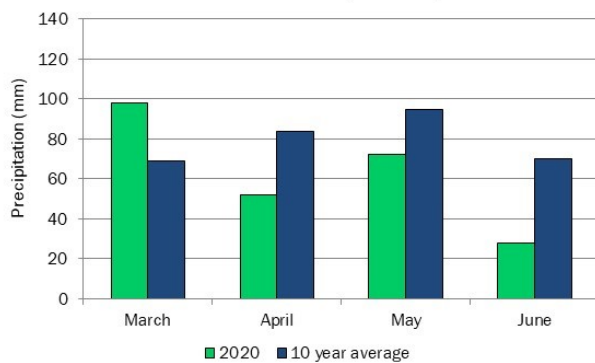


## Chatham-Kent County

Chatham-Kent Growing Degree Days

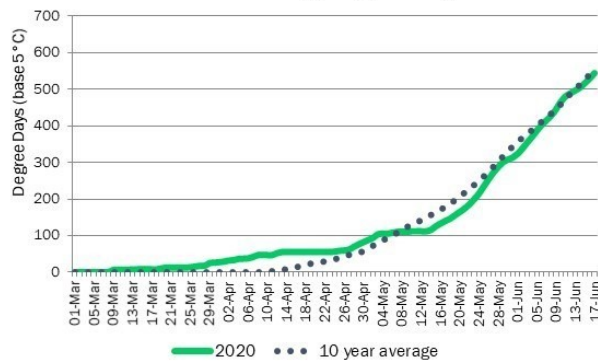


Chatham-Kent Total Precipitation per Month

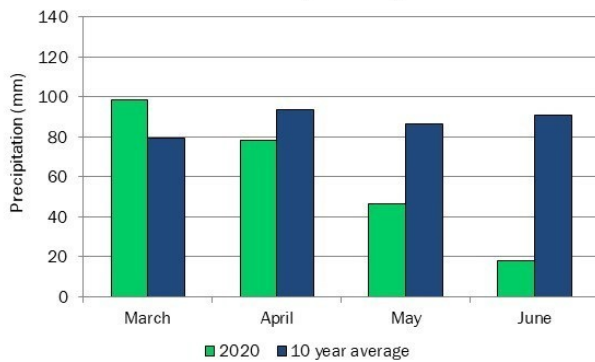


## Norfolk County

Norfolk Growing Degree Days

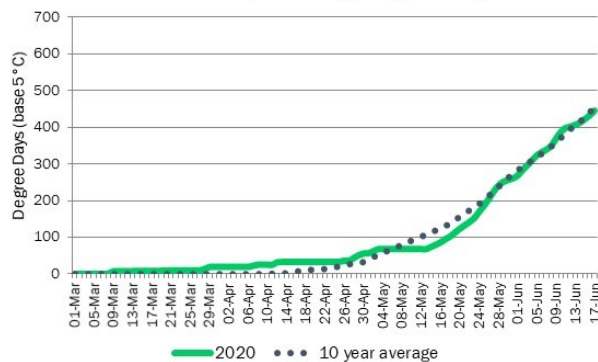


Norfolk Total Precipitation per Month

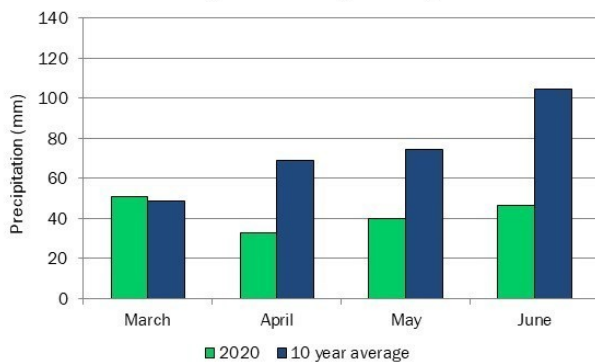


## Huron County

Huron County Growing Degree Days



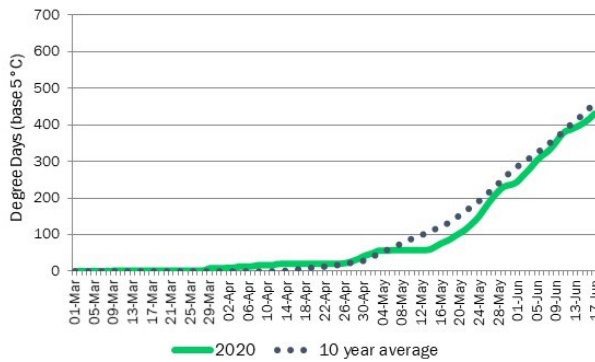
Huron County Total Precipitation per Month



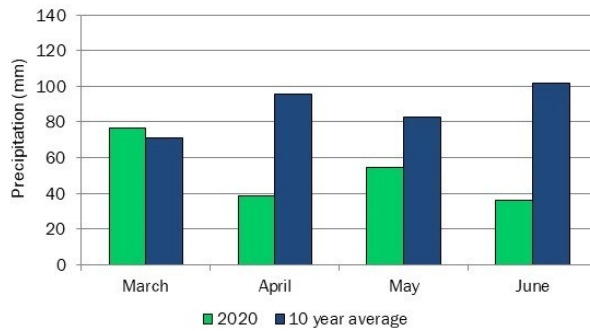
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## Wellington County

Wellington County Growing Degree Days

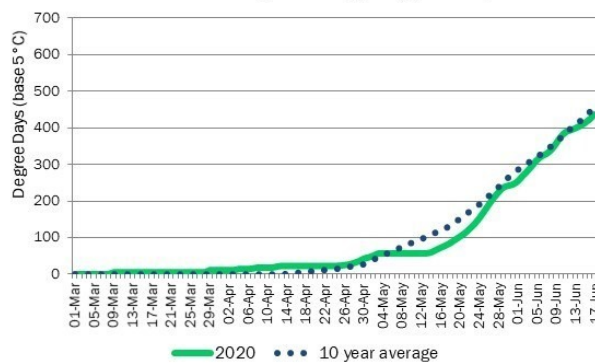


Wellington County Total Precipitation per Month

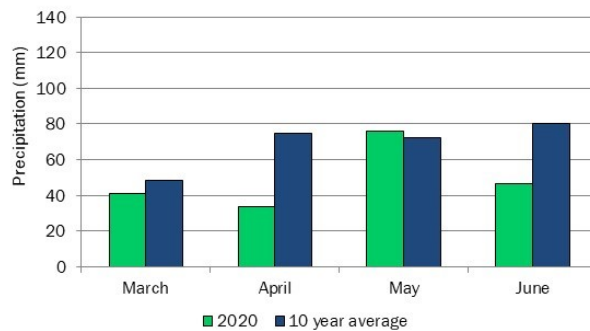


## Simcoe County

Simcoe County Growing Degree Days

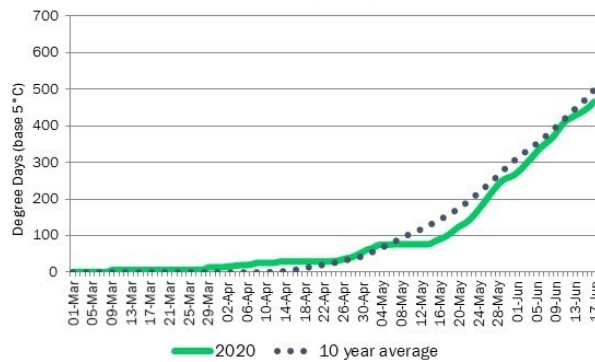


Simcoe County Total Precipitation per Month

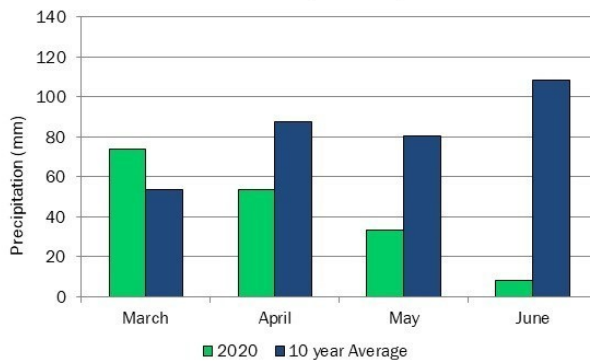


## Durham County

Durham Growing Degree Days

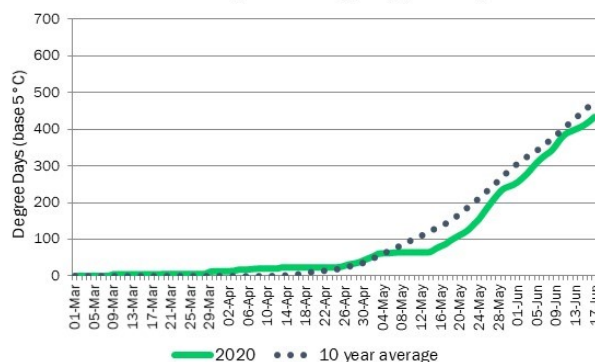


Durham Total Precipitation per Month

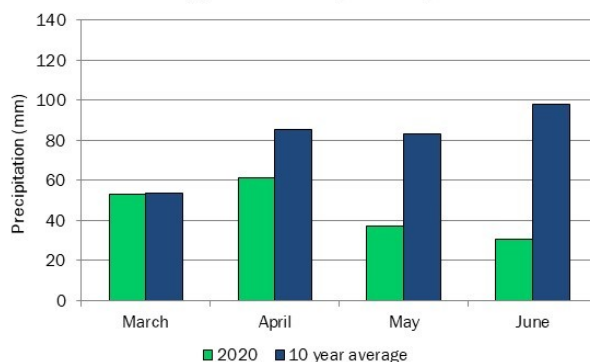


## Peterborough

Peterborough Growing Degree Days



Peterborough Total Precipitation per Month

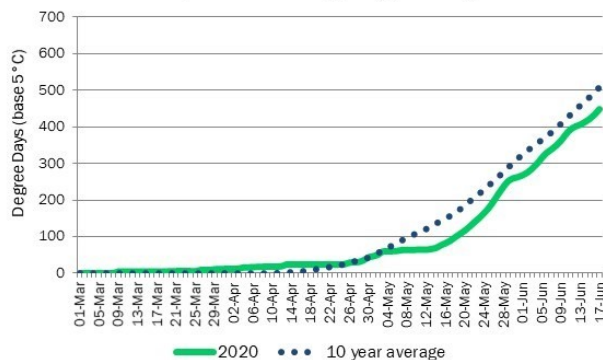




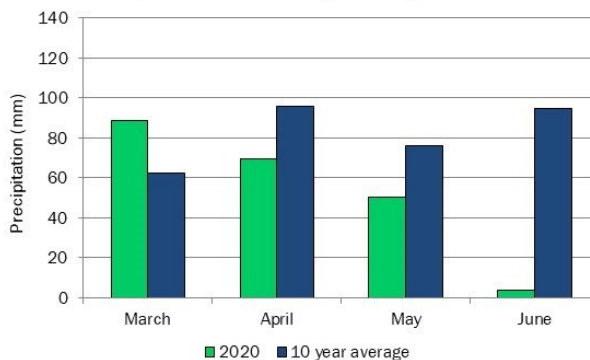
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## Kemptville

Kemptville Growing Degree Days

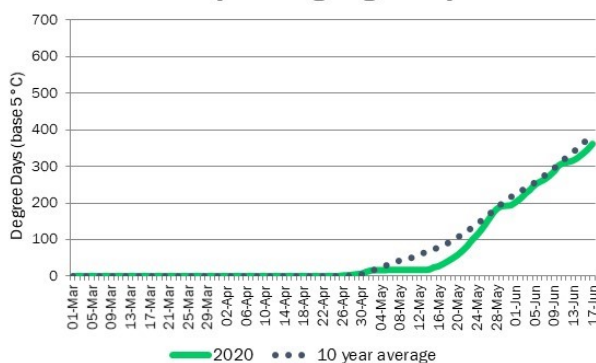


Kemptville Total Precipitation per Month



## Sudbury

Sudbury Growing Degree Days



Sudbury Total Precipitation per Month

