



Tuesday, August 24, 2021

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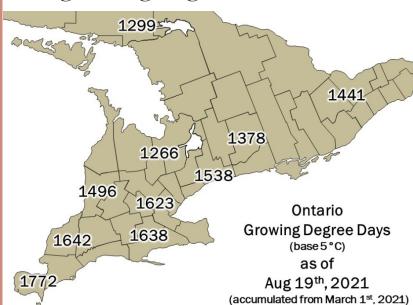
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## VCR – Vegetable Crop Report – August 19th, 2021

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** – Daytime temperatures are forecasted to rise into the thirties over the weekend. Most regions still remain above their GDD 10-year average.

Carrot rust fly is passing through its third and final threshold in Peterborough and Sudbury. Cabbage maggot is passing through its third threshold in Chatham-Kent and Norfolk. GDD data for each region is shown below.



**Rainfall** – Most regions are expected to have rainfall over the weekend leading into next week. Precipitation data for each region are shown below.

### Crop Updates

**Brassica Crops** –Lepidopteran pests continue to be high across the province and cabbage maggot has reached the threshold for the third generation in Essex, Chatham-Kent and Norfolk counties. Keep an eye out for cabbage aphids in the new growth of the plant. The warm and wet weather has accelerated bacterial pathogens like *Xanthomonas* (black rot, **Figure 1**), *Pectobacterium* and *Pseudomonas*. These bacteria overwinter in crop debris, soil and can also develop from contaminated seeds. Initial plants showing bacterial symptoms in the field should be rogued out/removed from the field as early as possible. Bacterial cells can spread to other plants in splashing raindrops, in wind, on insects and equipment, and infect new plants via natural openings or wounds made by insects. *Xanthomonas* black rot can even be spread by visiting cabbage maggot flies. If *Xanthomonas* black rot is found, work all crop debris deeply into the soil as soon as the crop is harvested. Avoid scouting or working in the crop when the crop is wet and start from the cleanest plantings first and move to plantings with known pathogens later in the day. To avoid black rot in the future, implement a 3-year crop rotation and ensure seeds have had a hot water seed treatment or been tested for black rot prior to planting. Disinfect greenhouse surfaces and avoid using previously used plug trays to ensure that black rot does not find its way into next season's crop. Over the next few weeks, keep an eye out for downy mildew, Alternaria and Sclerotinia development and Fusarium yellows.

**Figure 1.** Black rot caused by *Xanthomonas campestris* pv. *campestris*. Notice the 'V' shaped lesions where the bacteria entered the leaf tip through a hydathode, and as it grows within the leaf vein the tissue it services dies and turns brown – August 2021.



### “In This Issue”

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**Celery** – The weather has been conducive for many foliar and soil pathogens. Blackheart and Fusarium yellows can have very similar symptoms of leaf dieback and a rotted crown. To determine if you are seeing Fusarium yellows, take a cross-section of the crown and look for discolouration within the heart (**Figure 2**). In Fusarium Yellows, often the outer stalks stiffen and become brittle while in other foliar wilts the stalks become soft. Foliar pathogens, such as Cercospora and leaf curl (**Figure 3**) are becoming more prevalent depending on the region. Avoid working the crop while the canopy is wet to avoid spreading the celery leaf curl spores. Tarnished plant bugs and aster leafhoppers are active.



**Figure 2.** Cross-section of plant with fusarium discolouration in the crown – August 2020



**Figure 3.** Celery leaf curl spreading to adjacent plants – August 2021.

**Garlic** – If purchasing new planting stock, be sure to test it for bulb and stem nematode before planting it. Cloves can look healthy and show no symptoms of infection even though low levels (i.e. 10 nematodes/gram) are present. It is often not until the third or fourth year of planting that low levels of nematodes become high populations that cause severe basal rot and unmarketable bulbs (**Figure 4**). Bulb mite levels have been found to be high in the cured crops of several growing regions. Bulb mites prefer high humidity and survive the best during a slow curing process. To manage bulb mites in the future, speed up the curing process by removing moisture quickly and cure the crop in under 72 hours with forced air and a dehumidifier. Mites can survive on undecomposed crop residue; plant in fields where crop residue is thoroughly decomposed.



**Figure 4.** Severe degradation of the basal plate caused by bulb and stem nematode – July 2018.

**Onions** – Stemphylium leaf blight is progressing and direct-seeded onions are starting to lodge. Royal MH can be applied for sprout control when 50% of the crop has lodged and there are green tops that are still present to absorb the product. Apply at least 10 days before the crop is harvested. Now is a great time to assess damage plots that were put up in the spring. Determining the number of plants that survived out of the 100 germinated/transplanted plants that were counted at the start of the season is valuable information to determine what percentage of plants died due to onion maggot, drought, or some pest or pathogens. As blocks/fields start to lodge be mindful of younger, direct-seeded onions in border fields as the level of thrips may surge as they move to a greener crop. We are currently looking for Botrytis samples. If you are finding Botrytis lesions in your onion field, please call 519 835-3382 or E-mail [travis.cranmer@ontario.ca](mailto:travis.cranmer@ontario.ca).



**Figure 5.** Seeded onions lodging – August 17, 2021.

### Pest Degree Day Forecasting

\*NOTE: Data as of Aug 18th, 2021

County	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*	2072	1922	1488	1234	901	1627	1922	1118
Chatham-Kent*	1929	1781	1368	1122	751	1500	1781	1007
Norfolk**	1911	1765	1353	1107	739	1486	1765	991
Huron***	1774	1634	1243	1007	648	1366	1634	897
Wellington**	1723	1579	1187	950	600	1311	1579	841
Simcoe County***	1774	1629	1227	990	641	1354	1629	880
Durham***	1825	1681	1272	1041	686	1400	1681	933
Peterborough	1665	1519	1117	886	550	1244	1519	778
Kemptville***	1780	1638	1231	988	638	1362	1638	879
Sudbury***	1554	1424	1069	862	534	1181	1424	762

\*- 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

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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/2021/08/19/vcr2021-14/#essex>)

Chatham-Kent County(<https://onvegetables.com/2021/08/19/vcr2021-14/#chatham-kent>)

Norfolk County(<https://onvegetables.com/2021/08/19/vcr2021-14/#norfolk>)

Huron County(<https://onvegetables.com/2021/08/19/vcr2021-14/#Huron>)

Wellington County(<https://onvegetables.com/2021/08/19/vcr2021-14/#wellington>)

Simcoe County(<https://onvegetables.com/2021/08/19/vcr2021-14/#simcoe>)

Durham County(<https://onvegetables.com/2021/08/19/vcr2021-14/#durham>)

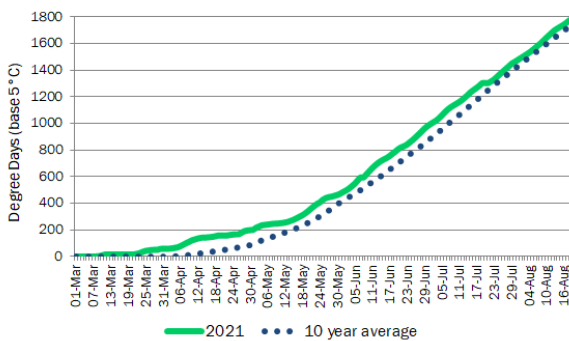
Peterborough(<https://onvegetables.com/2021/08/19/vcr2021-14/#peterborough>)

Kemptville(<https://onvegetables.com/2021/08/19/vcr2021-14/#kemptville>)

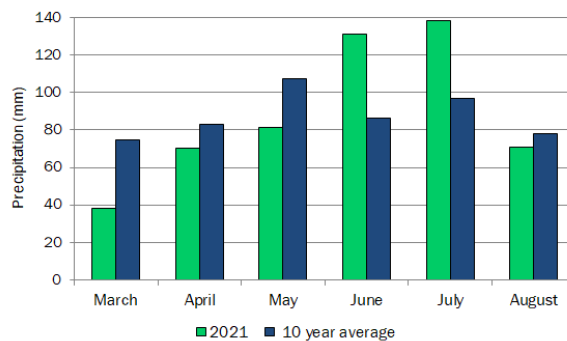
Sudbury(<https://onvegetables.com/2021/08/19/vcr2021-14/#sudbury>)

## Essex County

Essex Growing Degree Days

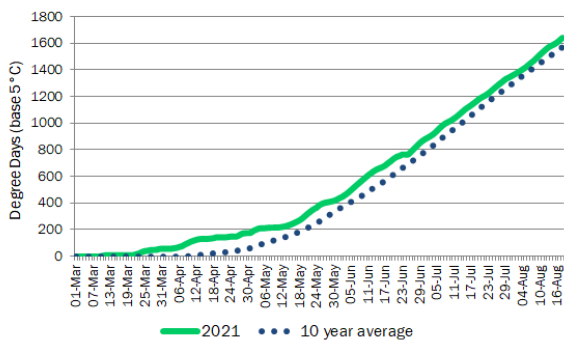


Essex Total Precipitation per Month

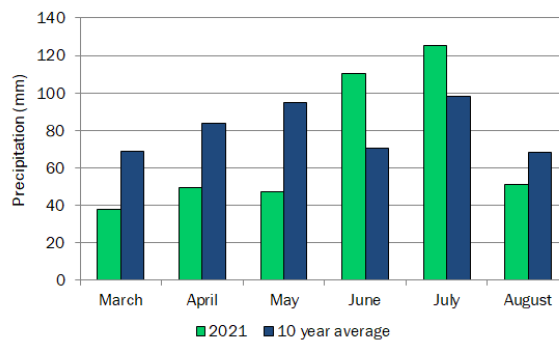


## Chatham-Kent County

Chatham-Kent Growing Degree Days

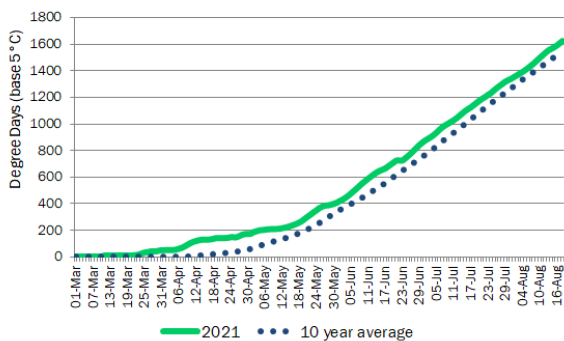


Chatham-Kent Total Precipitation per Month

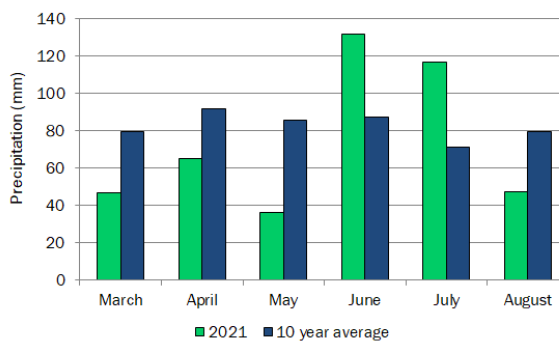


## Norfolk County

Norfolk Growing Degree Days



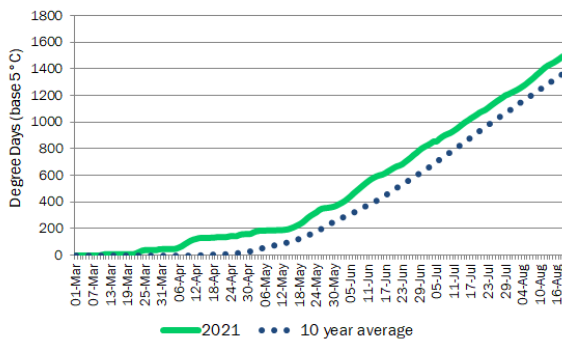
Norfolk Total Precipitation per Month



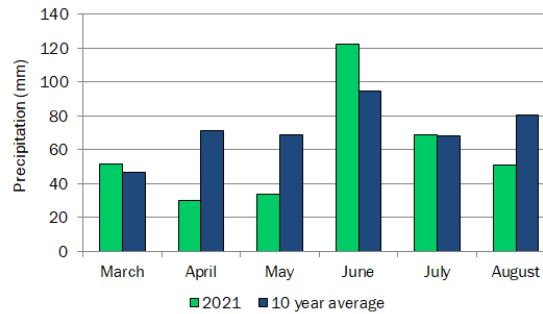
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## Huron County

Huron County Growing Degree Days

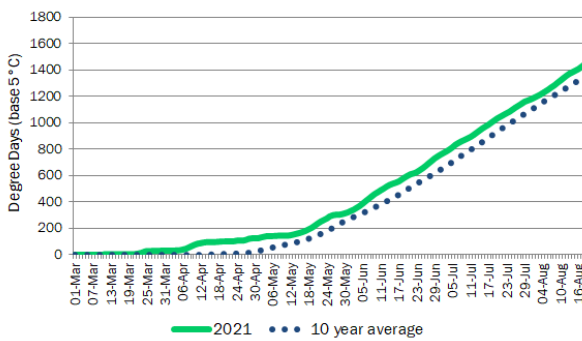


Huron County Total Precipitation per Month

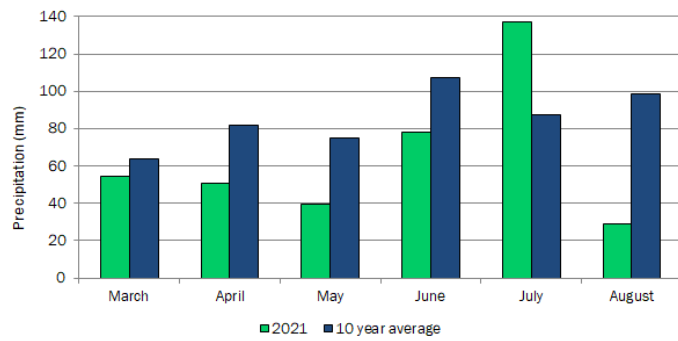


## Wellington County

Wellington County Growing Degree Days

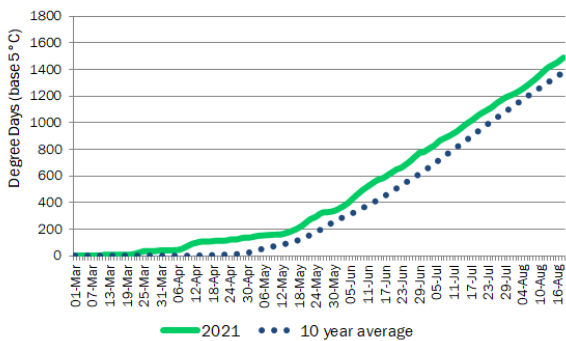


Wellington Total Precipitation per Month

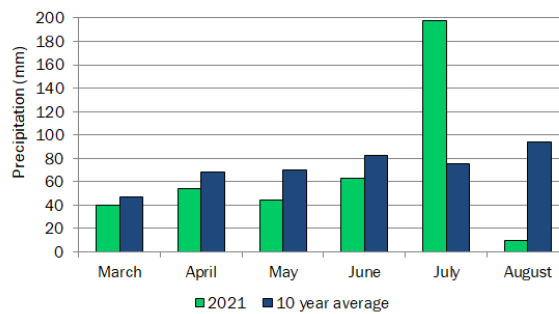


## Simcoe County

Simcoe County Growing Degree days

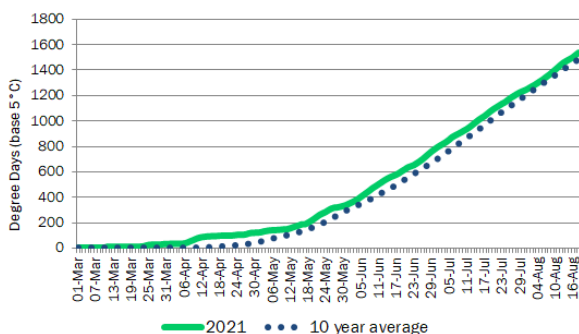


Simcoe County Total Precipitation per Month

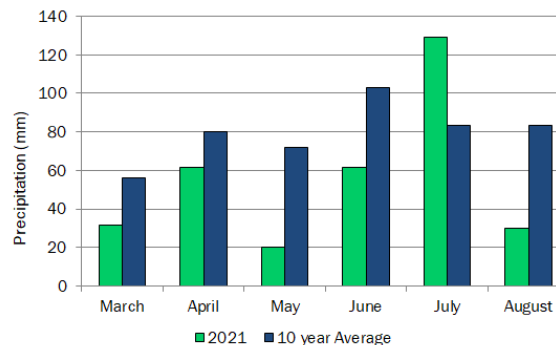


## Durham County

Durham Growing Degree Days



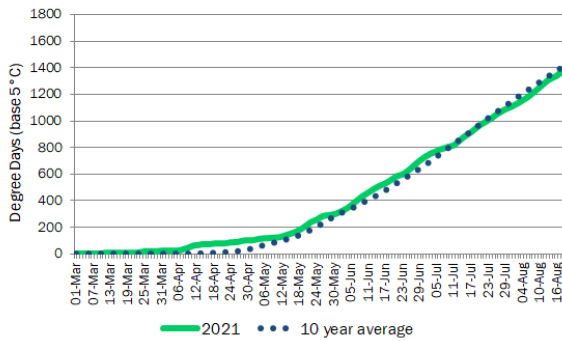
Durham Total Precipitation per Month



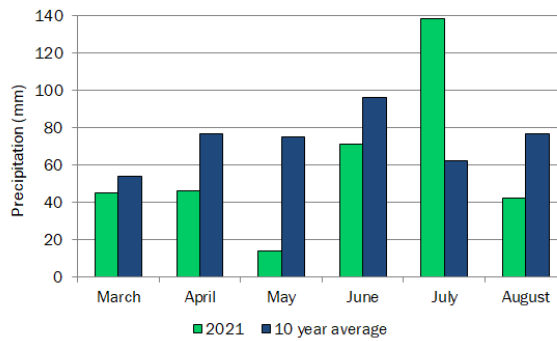
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Peterborough

Peterborough Growing Degree Days

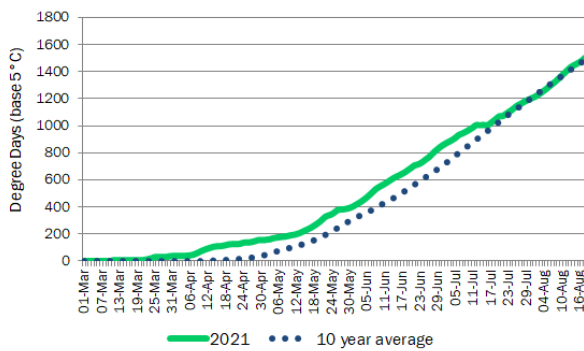


Peterborough Total Precipitation per Month

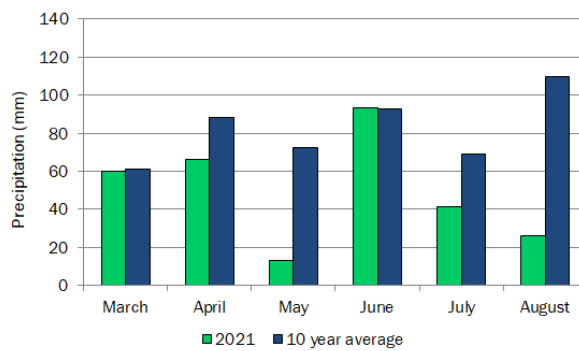


Kemptville

Kemptville Growing Degree Days

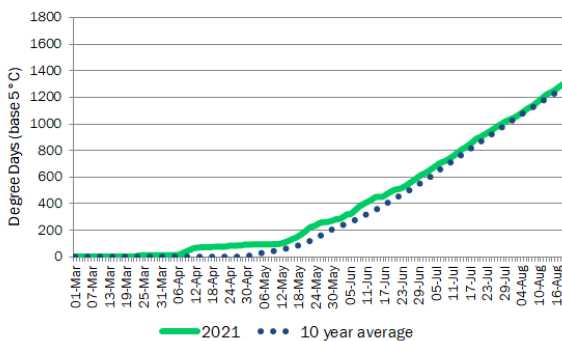


Kemptville Total Precipitation per Month



Sudbury

Sudbury Growing Degree Days



Sudbury Total Precipitation per Month

