Tuesday, August 25, 2020

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"In This Issue"

Introducing: New VCR Weather and Pest Dashboard

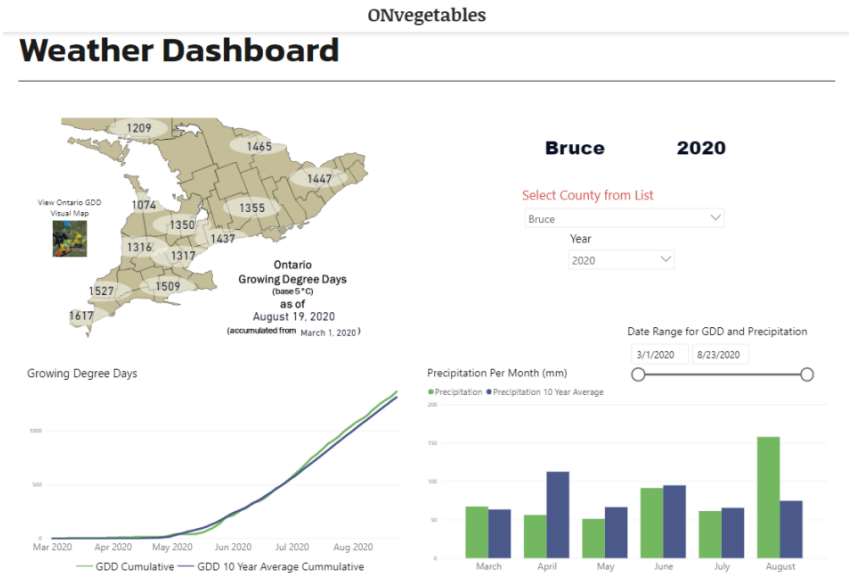
In an effort to make weather data, growing degree days (GDD) and pest forecasting information more up-to-date and accessible we are launching a Weather Dashboard (https://onvegetables.com/weather-dashboard/).

This Weather Dashboard will provide weather and pest information for each of the regions currently covered in the Vegetable Crop Report plus a few more newly added.

Each region will have a visual display of GDD and precipitation vs. the 10-year average. There are also region-specific pest thresholds that visually display when pests have reached a given threshold.

Growers are invited to check out the new tool and explore the data for a station nearest you. Historical weather data is currently available up to 2017 while previous year's data will continue to be added.

As always, feedback would be greatly appreciated!



What's Growing ON? – Episode 9

Episode 9: Pepper Weevil & Cyclamen Mites
In this episode, Kristy chats with co-host Cassie Russell, former acting Vegetable Crop Specialist and current acting Tree Fruit Specialist to talk about monitoring for the problematic invasive insect, the pepper weevil. For more information on how to properly identify pepper weevil, check out Which Weevil Warrants Worry?(https://medium.com/ongreenhousevegetables/which-weevil-warrants-worry-6f6a8402b23c) on the Ontario Greenhouse Vegetable(https://medium.com/ongreenhousevegetables) blog. Suspect you have pepper weevil? Contact Amanda Tracey – Vegetable Crop Specialist (amanda.tracey@ontario.ca) or Cara McCreary – Greenhouse Vegetable IPM Specialist (cara.mccreary@ontario.ca).

Also on this episode, Erica Pate – Fruit Crop Specialist, sits in the 'Horticulture Hotseat' to shine some light on the tiny but destructive pest of strawberries, the cyclamen mite.

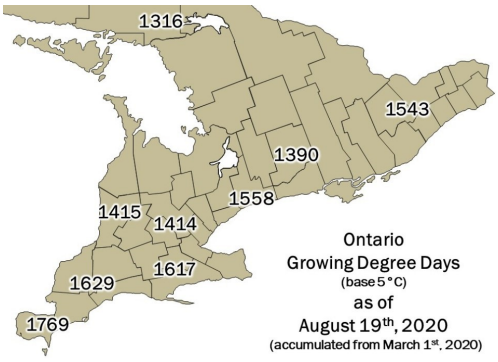
https://www.buzzsprout.com/1111115/5092544-pepper-weevil-cyclamen-mites?client_source=small_player&iframe=true&referrer=https://www.buzzsprout.com/1111115/5092544.js?container_id=buzzsprout-player-5092544&player=small

Have a question or a topic you would like us to cover? Email us at ONhortcrops@gmail.com

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

VCR – Vegetable Crop Report – August 20th, 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 rising again over the weekend and are expected to remain high with the humidex into the week. All regions remain above their GDD 10 year average except Peterborugh which is marginally behind. Carrot Rust Fly is at its second threshold in Huron, Wellington, Simcoe, Peterbrough, and Sudbury. Onion Maggot has reached second threshold in Sudbury and all other regions have passed. Cabbage Maggot is at threshold in Chatham-kent and Norfolk counties. Degree day data for each region is shown below.

Rainfall – Rain patterns are fairly different over the province this week. Once again there is a chance of rain and a risk of thunderstorms Sunday, Monday or Tuesday in some regions Southern Ontario. Eastern and Northern regions may see rain and thunderstorms scattered throughout the week. Huron, Simcoe, and Kemptville have surpassed their 10 year precipitation averages and many other regions are very close to receiving their 10 year average total. Essex and Sudbury have received less than half of their August 10 year averages so far. Precipitation data for each region is shown below.

Crop Updates

Beans & Peas – Wet and windy conditions have been favourable for a variety of diseases on beans including bacterial blight and *Sclerotinia* (Figure 1). Leafhoppers are active (Figure 1). Leafhoppers are responsible for causing hopper burn which can resemble drought stress. Thresholds for leafhopper are 10 nymphs per 100 leaves, or 5 adults per row. Adults can be difficult to count as they fly away from disturbed plants quickly.

Figure 1. Issues affecting snap bean, Middlesex county, 14 Aug. Clockwise from top left: defoliation of snap bean, leafhopper on bean leaf, bacterial blight symptom of bean leaves, sclerotia of *Sclerotinia* on bean leaf.

VCR – Vegetable Crop Report – August 20th, 2020…con't

Brassica Crops – The level of lepidopteran pests remains high across the province. Bacterial rots are being observed in head brassicas. Often these pathogens enter broccoli or cauliflower heads where an insect has chewed or where fungi have damaged the cell wall. With uneven heads and trapped water droplets, there have been several fields across the province that have observed black to brown spots in the beads or curds. The third generation of cabbage maggot is predicted for Chatham -Kent and Norfolk with all other regions following in degree days.

Carrots – The second generation of carrot rust fly is active in many regions of the province. You can monitor your fields with yellow/orange sticky cards along the edges. As canopies fill in, white mold is becoming more of a concern along with leaf blights. We are seeing an increase as those leaves remain wet. Use a 25% leaf blight incidence fungicide spray threshold.

Figure 2. Carrot Rust Fly larvae damage.

Figure 3. Close up of Carrot Rust Fly larvae damage on carrot.

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 what you are seeing is Fusarium yellows, take a cross section of the crown and look for a discolouration (Figure 4 below). 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 are becoming more prevalent depending on the region. Tarnished plant bugs and aster leaf hoppers are active and be on the lookout for Leafminers and wireworm.

Figure 4. Cross section of plant with fusarium discolouration in the crown – Aug 18, 2020

Cucurbits – Reports of cucurbit downy mildew (cdm) on squash and pumpkin are increasing in the US and new cdm reports from Pennsylvania, West Virginia, and Kentucky indicate that the main disease front continues to move northwards. We are monitoring the presence of cdm in Southwestern Ontario with cucurbit sentinel plots and spore traps (Figure 5) and will report new outbreaks here at Onvegetables.com. If you suspect downy mildew on cantaloupe, squash, or pumpkin, please contact Andrew Wylie (andrew.c.wylie@ontario.ca).

Powdery Mildew pressure is increasing on many cucurbit species, and cucumber beetles continue to be active this week, as they have been every week this summer (Figure 5).

Figure 5. Spornado spore trap, Simcoe, ON. Cucumber beetle and associate, Ridgetown, ON, Cucumber Downy Mildew, London ON, 19 Aug

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 now symptoms of infection even though low levels (i.e. 10 nematodes/gram) are present. It is often not until the third or forth year of planting that low levels of nematodes become high populations that cause severe basal rot and unmarketable bulbs (Figure 6).

Figure 6. High populations of bulb and stem nematode causing severe basal rot and an unmarketable bulb – July 19, 2018

Onions – 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 plants that were counted at the start of the season is valuable information to know. What percentage of plants died due to drought? Onion maggots? 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.

Peppers – Harvest for both processing and fresh market peppers is ongoing. The second generation of European corn borer is flying and laying eggs so be sure to be on the lookout for adults and scout for larval entry holes in the peppers. As of Wednesday, August 19th 2020, **no pepper weevil** have been caught on any **outdoor** traps in our pepper weevil monitoring program. A few anonymous specimens have been received and identified, though exact locations are known and no established populations identified. Recently there have been a number of inquiries about sprays for pepper weevil in field peppers. With limited options for pepper weevil control, sprays should only be used when pepper weevil is present in your field, which is why monitoring traps and scouting regularly is so important. Pepper weevil can look similar to other native weevil species so if you think you have pepper weevil adults on traps, or damage in your crop, please confirm the ID by send pictures or specimens to Amanda Tracey (amanda.tracey@ontario.ca) or Cara McCreary (cara.mccreary@ontario.ca). Another helpful tool for correctly identifying pepper weevil adults on sticky cards can be found here: What weevil warrants worry(https://medium.com/ongreenhousevegetables/which-weevil-warrants-worry-6f6a8402b23c).

Potatoes – We are nearing a critical stage where harvest is either underway or preparations are being made. The aim in some fields is to continue to keep those vines healthy and fill out the yield potential. In other fields, growers are focused on driving sugars down and getting the tubers to finish off prior to top-killing. Secondary growth is a real concern this year, especially in susceptible varieties (see Figure 7). As most vines have collapsed we are seeing white mold show up in those lower layers at the bottom of the canopies. Early blight is also increasing while no new late blight reports and very little spore activity across North America this season. On the insect front, continue to keep an eye out for leafhoppers, aphids and the second generation of CPB. Armyworm numbers were high in some cereal fields this year so keep an eye out in potato fields, especially around the edges.

Figure 7. Secondary growth in potatoes.

Tomatoes – Harvest is ongoing for both fresh market and processing tomatoes. Some fruit and foliage are showing signs of bacterial spot/speck. It's important to remember that prevention is the best tool against bacterial diseases in tomatoes. Late blight has been reported in Wisconsin in potato. Spores that cause this serious disease in tomatoes tend to move up from the southern US throughout the season and will cause brown, greasy-looking spots on developing fruits. Be sure to scout thoroughly for late blight symptoms. Spray applications targeting late blight should not be applied until symptoms are seen in your field or neighbouring crops. If you are looking for a refresher on scouting and identifying diseases in tomatoes, you can click here to watch this lecture(https://www.youtube.com/watch?v=Y8cqKfUHpm0&t=944s) by OMAFRA pathologist, Katie Goldenhar.

VCR – Vegetable Crop Report – August 20th, 2020…con't

NOTE: Data as of August 19th, 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*	2063	1912	**1505**	**1272**	**951**	1634	1912	1162
Chatham-Kent*	1909	1764	**1382**	**1158**	**806**	**1501**	1764	1052
Norfolk**	1899	1755	**1361**	**1138**	**788**	**1484**	1755	1031
Huron***	**1666**	1538	**1188**	**972**	**639**	1299	1538	868
Wellington**	**1674**	1540	**1186**	**975**	**651**	1298	1540	875
Simcoe County***	**1703**	1571	**1222**	**1010**	**688**	1334	1571	910
Durham***	1825	1689	**1323**	**1108**	**772**	1436	1689	1005
Peterborough	**1653**	1518	**1159**	**945**	**617**	1271	1518	843
Kemptville***	1806	1673	**1310**	**1098**	**769**	1422	1673	997
Sudbury***	**1540**	**1425**	**1109**	**917**	**608**	1209	1425	824

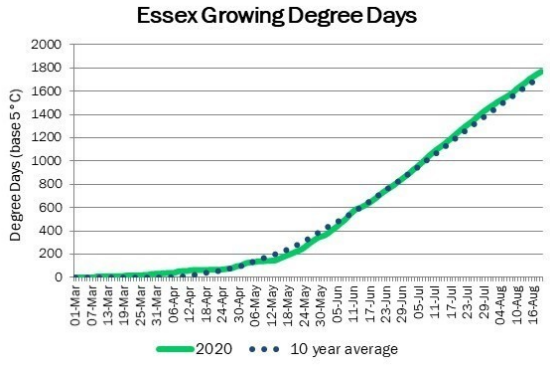
*- Bivoltine region for ECB. First Peak Catch: 300-350 DD, Second Peak Catch 1050-1100 DD
**- Overlap region for ECB. First Peak Catch : 300-350 DD Second Peak Catch 650-700 DD, Third Peak Catch 1050-1100 DD
***-Univoltine region for ECB. Peak Catch 650-700 DD

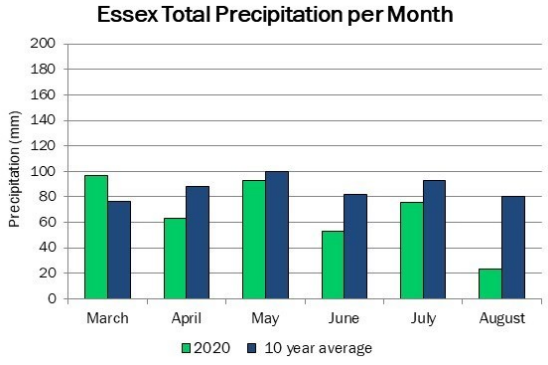
Use these thresholds as a guide, always confirm insect activity with actual field scouting and trap counts.

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

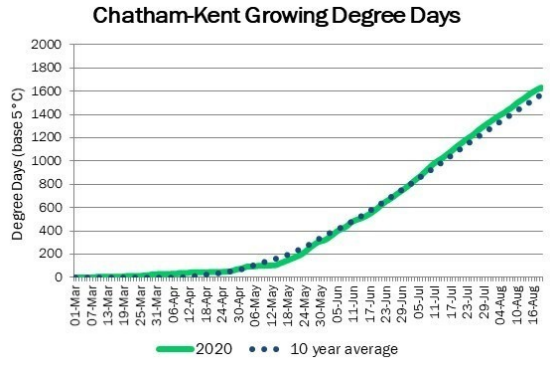
Essex County(https://onvegetables.com/2020/08/20/2020vcr-17/#essex)
Chatham-Kent County(https://onvegetables.com/2020/08/20/2020vcr-17/#chatham-kent)
Norfolk County(https://onvegetables.com/2020/08/20/2020vcr-17/#norfolk)
Huron County(https://onvegetables.com/2020/08/20/2020vcr-17/#huron)
Wellington County(https://onvegetables.com/2020/08/20/2020vcr-17/#wellington)
Simcoe County(https://onvegetables.com/2020/08/20/2020vcr-17/#simcoe)
Durham County(https://onvegetables.com/2020/08/20/2020vcr-17/#durham)
Peterborough(https://onvegetables.com/2020/08/20/2020vcr-17/#peterborough)
Kemptville(https://onvegetables.com/2020/08/20/2020vcr-17/#kemptville)
Sudbury(https://onvegetables.com/2020/08/20/2020vcr-17/#sudbury)

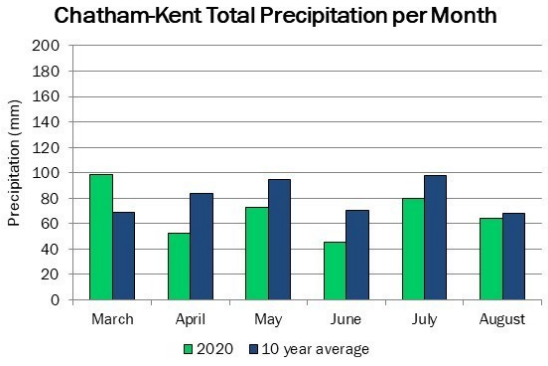
Essex County





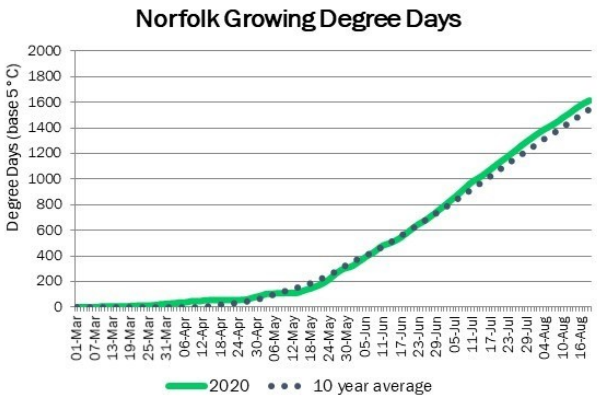
Chatham-Kent County

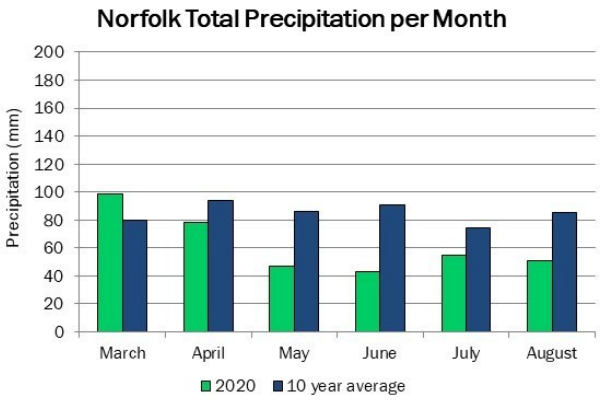




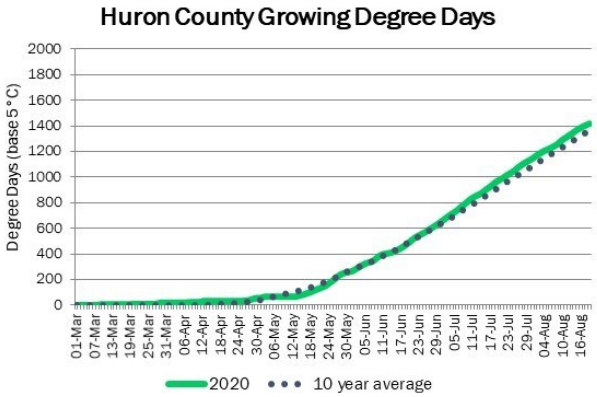
VCR – Vegetable Crop Report – August 20th, 2020…con't

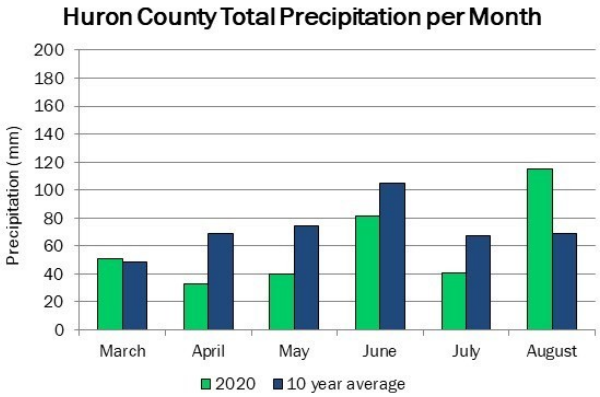
Norfolk County



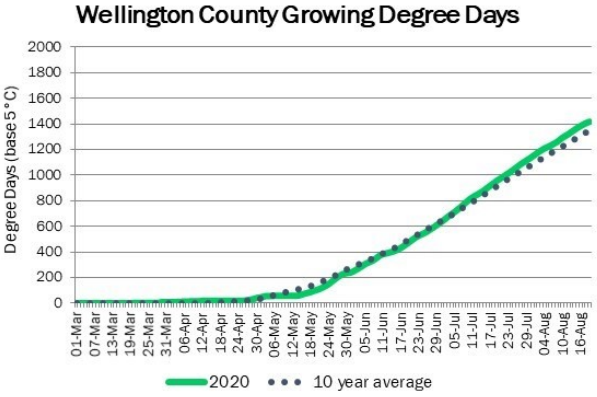


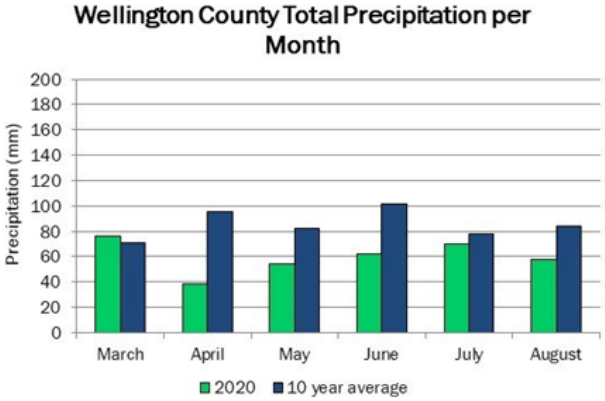
Huron County



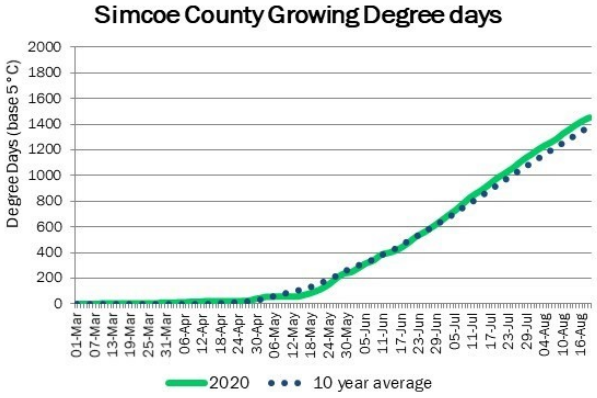


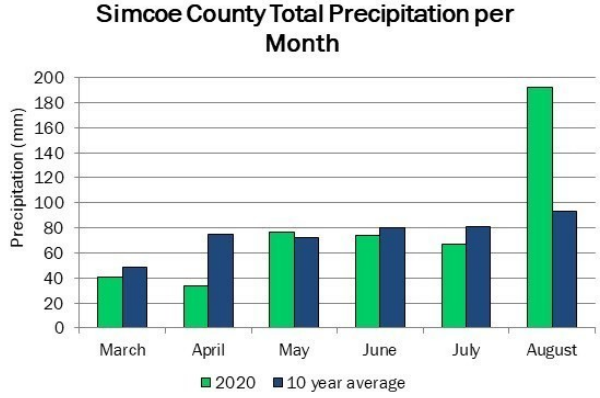
Wellington County





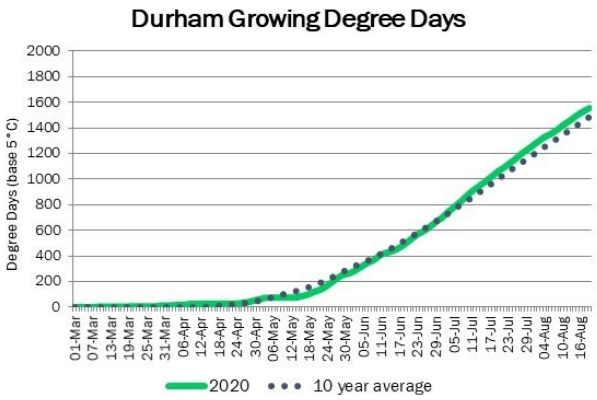
Simcoe County

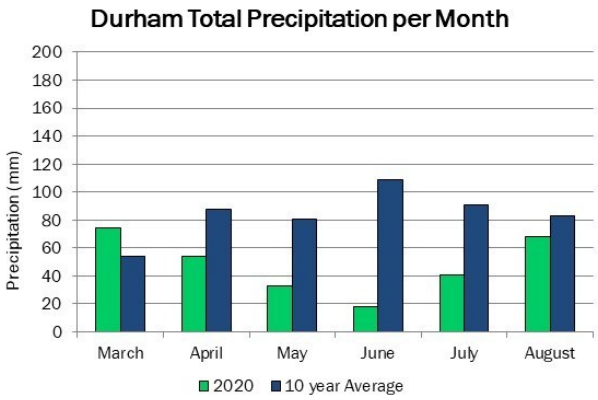




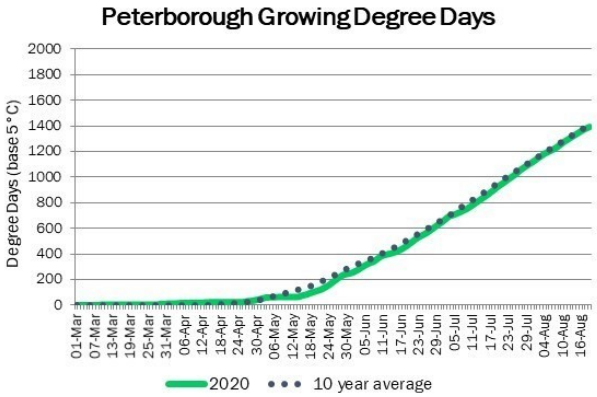
VCR – Vegetable Crop Report – August 20th, 2020…con't

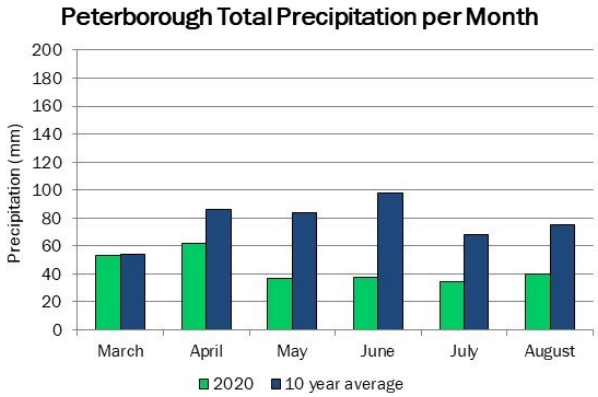
Durham County



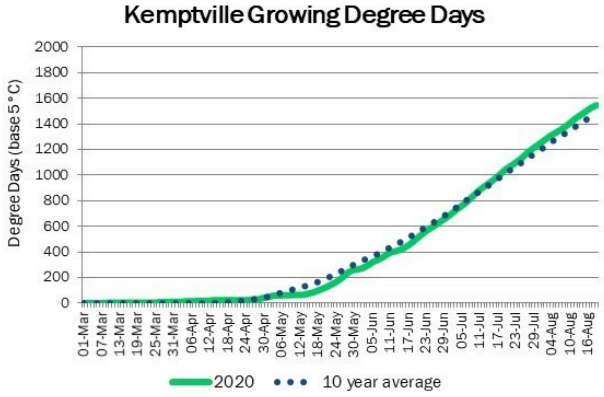


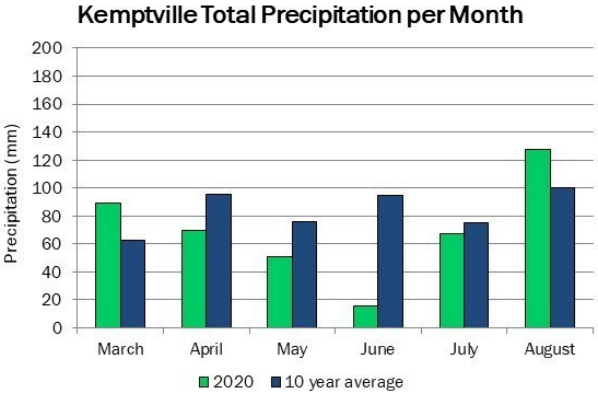
Peterborough





Kemptville





Sudbury