Tuesday, July 21, 2020

OMAFRA Vegetable Team:

Travis Cranmer, Guelph
519-835-3382
travis.cranmer@ontario.ca

Dennis Van Dyk, Guelph
519-766-5337
dennis.vandyk@ontario.ca

Andrew Wylie, Ridgetown
519-401-5890
andrew.c.wylie@ontario.ca

Cassandra Russell, Ridgetown
519-350-7134
cassandra.russell2@ontario.ca

"In This Issue"

- What's Growing ON? – Episode 5
- VCR – Vegetable Crop Report – July 16th, 2020

What's Growing ON? – Episode 5

Episode 5: Most Crop Per Drop
In this episode, Kristy speaks with Rebecca Shortt, Water Quantity Engineer, who shares tips on how to make every drop of irrigation count for horticulture production. For more information and links to videos mentioned in this episode, visit the Ontario Ministry of Agriculture, Food & Rural Affairs Irrigation website(http://www.omafra.gov.on.ca/english/engineer/irrigation.htm). Plus, Ontario crop updates from July 10th, 2020.

Listen here: https://www.buzzsprout.com/1111115/4559543-most-crop-per-drop?client_source=small_player&iframe=true&referrer=https://www.buzzsprout.com/1111115/4559543.js?container_id=buzzsprout-player-4559543&player=small
Music: Aspire by Scott Holmes

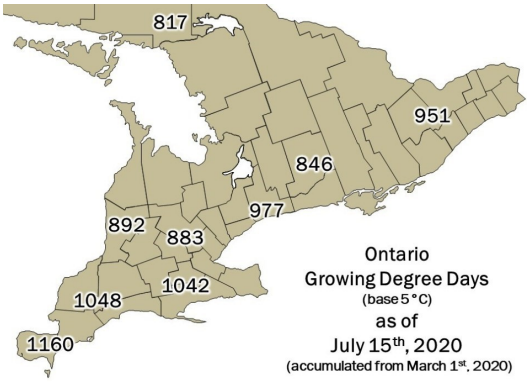
Have a question or a topic you would like us to cover? Email us at ONhortcrops@gmail.com

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

VCR – Vegetable Crop Report – July 16th, 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 – High temperatures continue throughout Ontario. Many regions have surpassed their GDD 10 year average. Onion maggot has reached threshold in Essex, Chatham-Kent, Norfolk, Durham and Kemptville. Cabbage maggot and Seedcorn maggot have reached threshold in Chatham-Kent, Norfolk, Durham and Kemptville. Degree day data for each region is shown below.



VCR – Vegetable Crop Report – July 16th, 2020...con't

Rainfall – Many regions received some rain in the past week. Essex, Chatham-kent, Wellington, and Simcoe received enough to bring them closer to their 10 year precipitation averages. Sudbury has surpassed it's 10 year average. There are chances of thunderstorms and showers over the weekend and towards the middle of next week. Precipitation data for each region is shown below.

Crop Updates

Beans and Peas – High humidity experienced by many areas this week is conducive to Sclerotinia white mould. Check inside the canopy for the development of white, cottony mycelial growth. Potato Leafhopper tends to move to other crops once alfalfa has been harvested. This pest has been reported in several areas: scout for nymphs and adults and watch for hopper burn which can resemble drought stress, and for stunting, dropped flowers/pods, and defoliation.

Brassica Crops – Scout for Alternaria aphids, and thrips. Lepidopteran pests are present in many fields, mainly imported cabbage worm and diamondback moth. Refer to the newsletter from June 18(https://onvegetables.com/2020/06/18/2020vcr-8/) for information on specific thresholds. Incorporate all crop residue into the soil from a block once it is harvested.

Celery – Black heart, caused by a calcium deficiency has been seen in some fields as well as some carrot weevil damage. Leaf tip dieback has been observed from the heat last week and these wounds may be entry points for bacteria to enter the plant over the upcoming weeks. Be on the lookout for celery leaf blights and celery leaf curl and avoid scouting the field when the leaves are wet to lower the chance of pathogen transmission throughout the field.

Cucurbits – Downy Mildew has been found in many areas of Ontario: Outbreaks have been confirmed in Kent County (July 6th), Elgin County (July 7th), Norfolk County (July 7th), and Lambton County (July 14th). Unconfirmed cases are being investigated in Haldimand and Niagara. There are also confirmed cases in Michigan, Ohio, and New York so pressure is high. Check out our post (Cucumber Downy Mildew Confirmed in Great Lakes Region – June 22, 2020(https://onvegetables.com/2020/06/23/cucumber-downy-mildew-confirmed-in-the-great-lakes-region-22-jun-2020/)) for more details including spray recommendations: growers should be using downy mildew specific fungicide programs in the Great Lakes region. If you suspect that you have downy mildew symptoms in any cucurbit crops including melons, pumpkin, and squash, please contact Andrew Wylie (Andrew.c.wylie@ontario.ca) or Katie Goldenhar – Pathologist-Horticulture (katie.goldenhar@ontario.ca) as we are tracking the epidemic.

Figure 1. Downy Mildew on cucumber in Ontario. Clockwise from top left: Kent County 10 July, Lambton county 13 July, Haldimand county 14 July (photo John Warbick, OMAFRA), Kent county 13 July, Norfolk county 7 July.

Cucumber harvest is well underway in all cucumber growing regions, and larger cucurbits are growing well. Cucumber beetle flushes have been continuous this summer, and the percentage of cucumber beetles harbouring the causative agent of bacterial wilt tends to increase over the season. Listen to our discussion on What's Growing ON? Ep. 3(https://onvegetables.com/2020/06/23/whats-growing-on-episode-3/) for more info on cucumber beetle (Also available through Spotify (https://open.spotify.com/episode/2VGU3x8aUcdu2CtLl4f9z9) and Apple Podcasts(https://podcasts.apple.com/us/podcast/cucumber-beetle-grape-set/id1517490636?i=1000479224400)).

Garlic – Harvest is underway across the province. The ideal time to harvest porcelain cultivars (such as 'Music') is when 50% of the leaves have senesced or turned yellow. Since it takes several days to harvest, many growers start at 40% and by the time the crop is fully harvested it may have reached 70%. While harvesting, be on the lookout for any insect damage to the leaves, stem or bulb. Leek moth causes wounds to the scape and leaves and larvae can be found in the bulb. Allium leaf miner can cause similar damage in garlic, however, brownish-red pupae can also be found in the stem when the layers are peeled apart (below). If you suspect you have Allium leaf miner damage please contact travis.cranmer@ontario.ca or call 519 835-3382. After harvest, avoid storing harvested bulbs in direct sun as this has shown to reduce storage life. Storage pathogens and storage insects, such as bulb mites, find it easier to survive when the crop is dried out over a prolonged period of time. To reduce the survival of these pests, speed up the curing process. A reduction in humidity is more important than heat when it comes to curing garlic. Often heat is used to increase the water-holding capacity of air, however, garlic can be cured properly at a lower temperature so as long as the humidity is low. Take the time to cull/remove bulbs with rots or defects before they go into storage. The higher the quality of crop that goes into storage, the longer it will last.

Figure 2. If insect damage is visible to or the plant has wilted, check inside the garlic stalk for brown pupae.

Onions – Weather has been conducive for Stemphylium development. Refer to the newsletter from June 25 on information about Stemphylium. Purple blotch and pink root has been observed in some fields. Onion and seedcorn maggot are active in many regions across the province and will be laying eggs. With all the hot weather, the population of thrips has potential to greatly increase over the next week. Apply no more than two consecutive insecticides from the same IRAC crop as thrips have a relatively short life cycle with multiple generations through the summer months and are at a high risk of developing insecticide resistance. In most onion growing regions, conditions have not been favourable for downy mildew development.

Figure 3. Count the number of onion thrips on 10 plants and divide by the average number of leaves. The application threshold is 1 thrips/leaf

Peppers – The second generation flight of European corn borer (ECB) is expected shortly in Essex and Kent regions, and any preventative chemical controls should be initiated soon. Continue to monitor for adults and scout for larval entry holes in fruits. ECB pheromone traps are a great tool to help time product applications. If you have a trap set up, consider adding it to the Great Lakes and Maritimes Pest Monitoring Network 2020(https://ontarioca11.maps.arcgis.com/apps/MapSeries/index.html?appid=df7c044f224e4345825e75d1fa561560). As of Thursday, July 16th 2020, no pepper weevil have been caught on any outdoor traps in SW Ontario.

Sweet corn – Lepidopteran and other pest populations continue to build in sweet corn: for detailed information refer to the Great Lakes and Maritime Pest Monitoring Network(https://ontarioca11.maps.arcgis.com/apps/MapSeries/index.html?appid=df7c044f224e4345825e75d1fa561560) for updates. Look for European Corn Borer, Corn Earworm, Western Bean Cutworm, and Corn Leaf Aphids. Common Stalk Borer has also been found so check areas adjacent to grasses. For a review of lepidopteran pests in sweet corn, check out Andrew's video(https://www.youtube.com/watch?v=iabN-02_NoA) on these.

Tomatoes – Growers should be on a good foliar disease program by now as rains and humidity are expected over the next week and will be favourable for disease development. Check back to the updated Fungicide Efficacy Tables(https://onvegetables.com/2020/06/01/fungicide-efficacy-summary-tables-for-management-of-diseases-in-field-tomatoes-4/) by Cheryl Trueman for information to help manage diseases in field tomatoes. High nighttime temperatures have caused some flowers to drop, but overall fruit set has been good especially with recent rains.

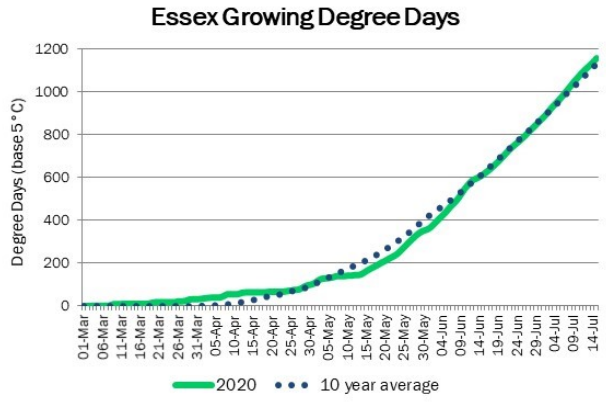
NOTE: Data as of July 15th, 2020
Pest Degree Day Forecasting

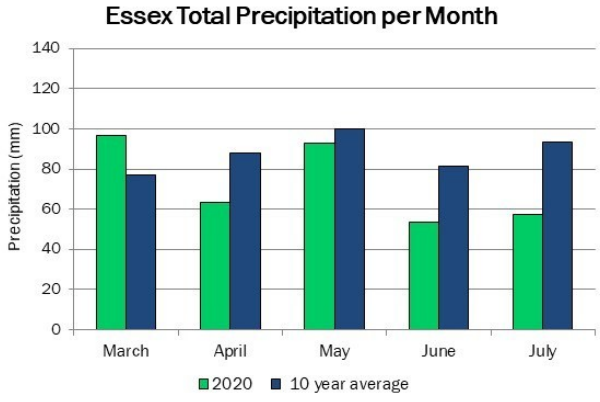
Pest	Carrot Rust Fly	Onion Maggot	Carrot Weevil	Aster Leafhopper	Tarnished Plant Bug	Cabbage Maggot	Seedcorn Maggot	European Corn Borer
THRESHOLD	329-395, 1399-1711	210-700, 1025-1515	138-156, 455+	128+	40+	314-398, 847-960, 1446-1604	200-350, 600-750, 1000-1150	See legend below
Essex*	1383	**1267**	**966**	**802**	**586**	1059	1267	728
Chatham-Kent*	1258	**1148**	**871**	**717**	**484**	**955**	**1148**	646
Norfolk**	1255	**1146**	**857**	**704**	**473**	**945**	**1146**	632
Huron***	1073	980	**736**	**590**	**376**	811	980	521
Wellington**	1072	974	**725**	**584**	**379**	802	974	519
Simcoe County***	1086	989	**745**	**604**	**400**	822	989	538
Durham***	1173	**1072**	**811**	**667**	**449**	**889**	**1072**	599
Peterborough	1039	938	**685**	**541**	**332**	762	938	474
Kemptville***	1144	**1045**	**787**	**645**	**436**	**864**	**1045**	580
Sudbury***	971	892	**681**	**559**	**369**	746	892	500

*- 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

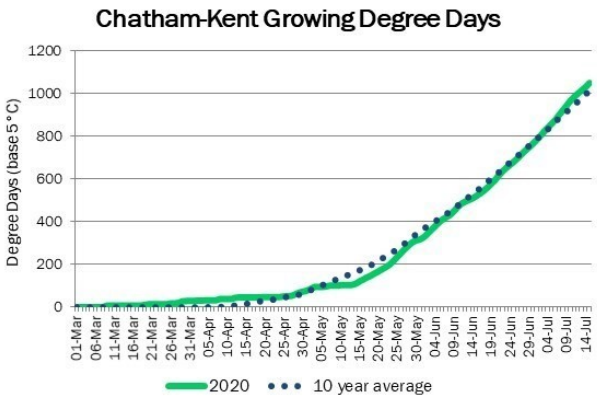
Use these thresholds as a guide, always confirm insect activity with actual field scouting and trap counts.
Select a region below for the latest weather, crop and pest degree day information:
Essex County(https://onvegetables.com/2020/07/16/2020vcr-12/#essex)
Chatham-Kent County(https://onvegetables.com/2020/07/16/2020vcr-12/#chatham-kent)
Norfolk County(https://onvegetables.com/2020/07/16/2020vcr-12/#norfolk)
Huron County(https://onvegetables.com/2020/07/16/2020vcr-12/#huron)
Wellington County(https://onvegetables.com/2020/07/16/2020vcr-12/#wellington)
Simcoe County(https://onvegetables.com/2020/07/16/2020vcr-12/#simcoe)
Durham County(https://onvegetables.com/2020/07/16/2020vcr-12/#durham)
Peterborough(https://onvegetables.com/2020/07/16/2020vcr-12/#peterborough)
Kemptville(https://onvegetables.com/2020/07/16/2020vcr-12/#kemptville)
Sudbury(https://onvegetables.com/2020/07/16/2020vcr-12/#sudbury)

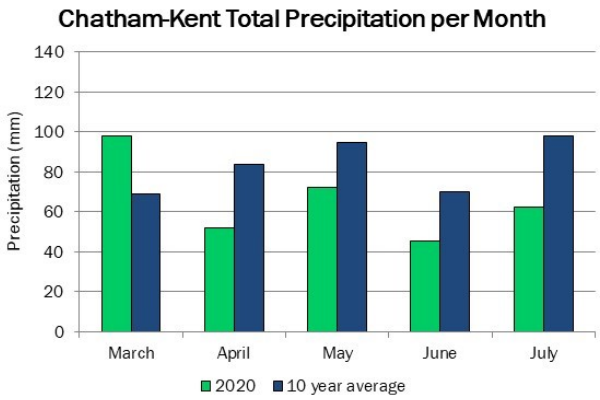
Essex County



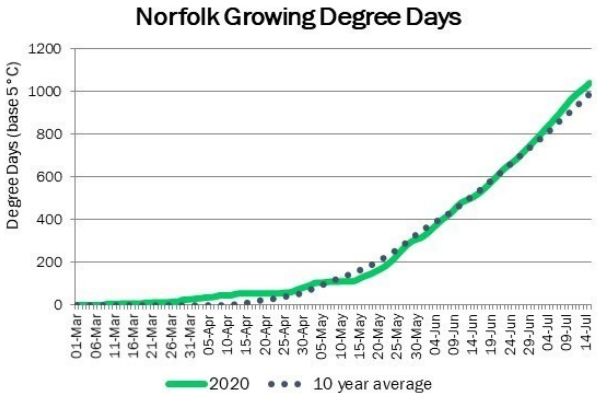


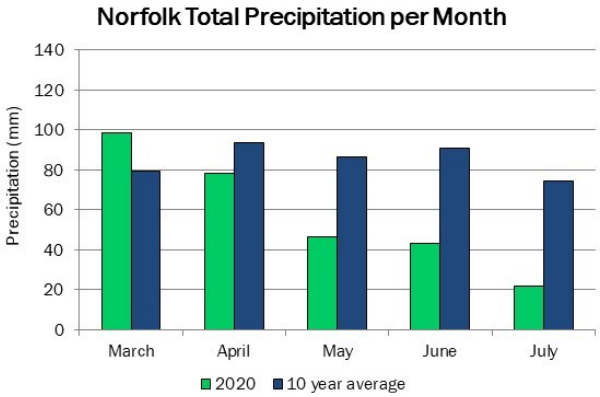
Chatham-Kent County



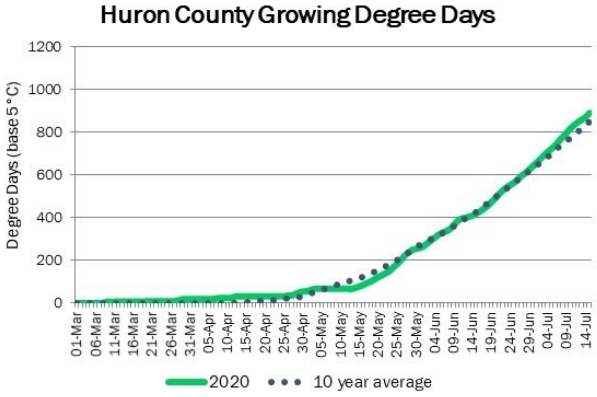


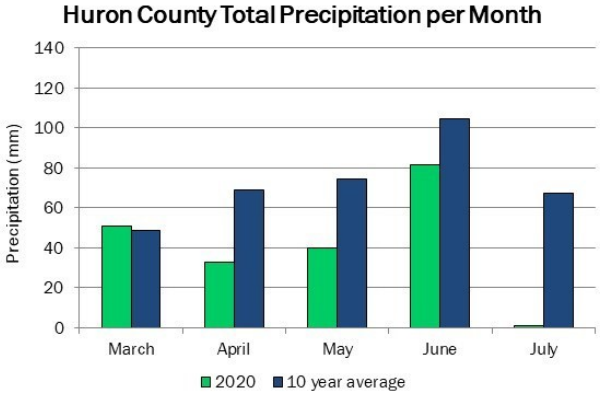
Norfolk County



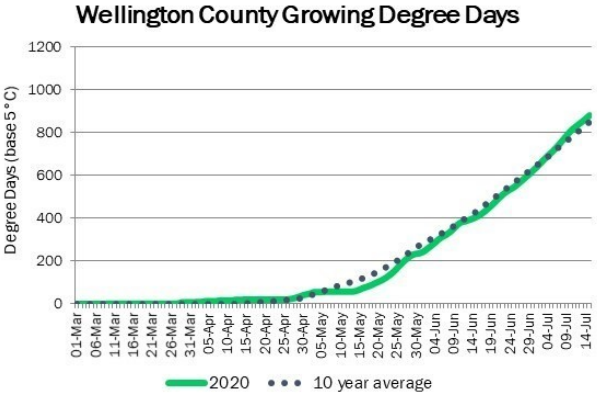


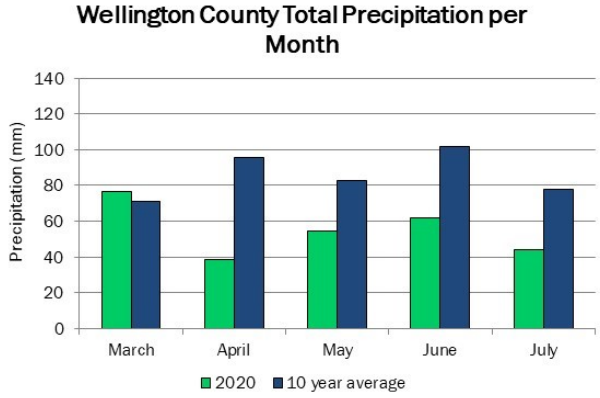
Huron County



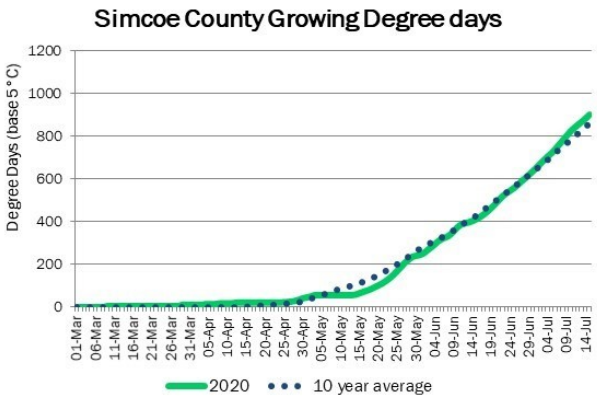


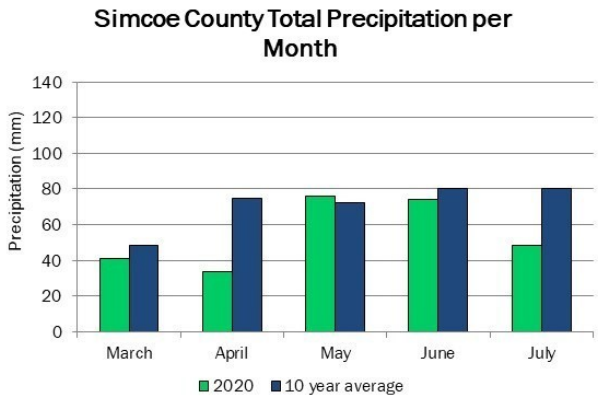
Wellington County



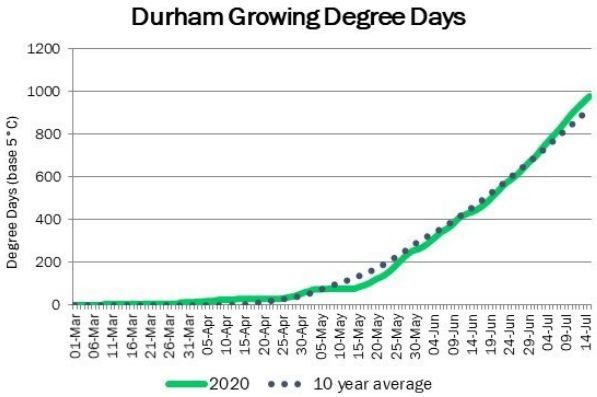


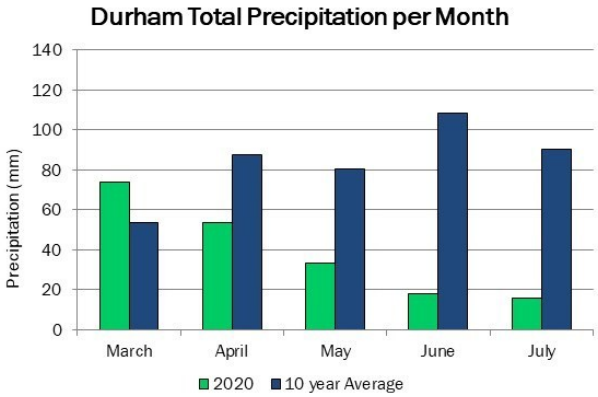
Simcoe County



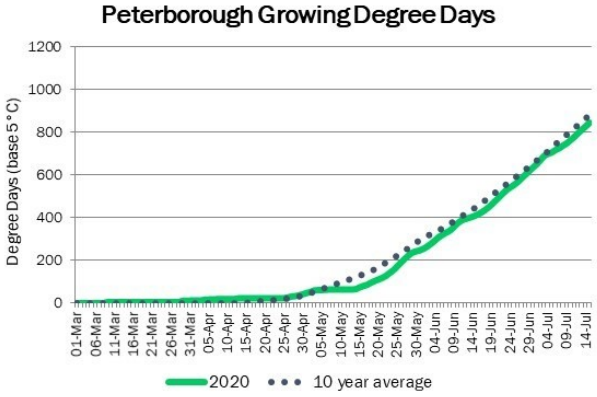


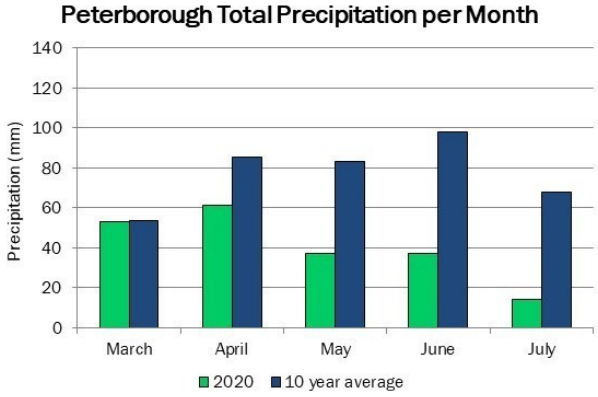
Durham County



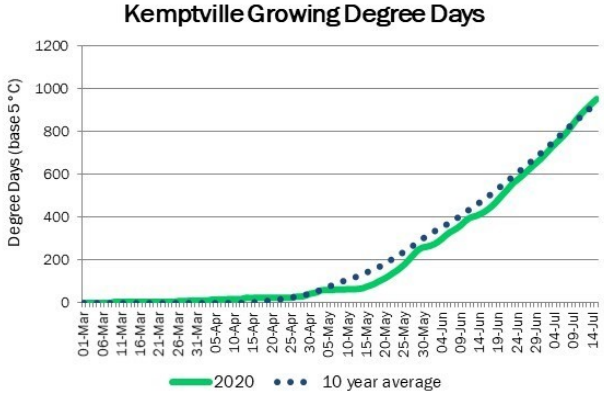


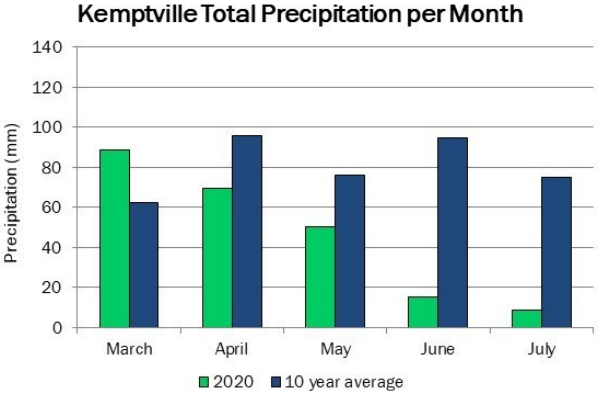
Peterborough





Kemptville





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Sudbury