Tuesday, July 28, 2020

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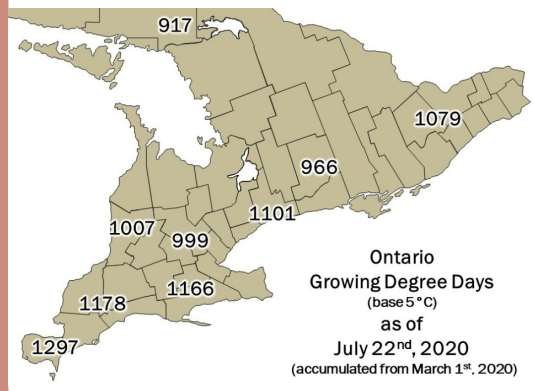
"In This Issue"

VCR – Vegetable Crop Report – July 23rd, 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 lowering later into the week. Most regions have surpassed their GDD 10 year average. Carrot rust fly is at its second threshold in Essex and Chatham-Kent. Onion maggot has reached threshold in all regions except Sudbury. Cabbage maggot and Seedcorn maggot have reached threshold in Huron, Wellington, and Kemptville Regions and Seedcorn maggot has also reached threshold in Sudbury. Degree day data for each region is shown below.

Rainfall – Once again, many regions received rain in the past week. Sudbury has now received 2x its 10 year average for July. Huron, Durham and Peterborough have only received around half their 10 year average rainfall thus far. There is a chance of rain and thunderstorms over the weekend in most of Ontario. Eastern regions may see rain later into the week. Precipitation data for each region is shown below.

Crop Updates

Brassica Crops – Alternaria has been observed in some areas as well as in transplants. As blocks are harvested, remember to incorporate all crop residue into the soil to lower the spore load of the field.

Carrots – With the cooler overnight temperatures leaf blights have really taken off. Carrots were likely stressed from heat/drought allowing Alternaria and Cercospora to get in. Use a 25% incidence spray threshold.

Celery – Bacterial rot has been observed in some areas. With the hot weather observed in early July, bacteria may have entered the plant through damaged tissue while irrigating. Black heart/calcium deficiency has been seen in some fields as well. Be on the lookout for celery leaf curl over the coming weeks.

Figure 1. Bacterial Rot on celery.

Cucurbits – Harvanta (cyclaniliprole) is now labelled for cucumber beetle suppression. Controlling cucumber beetle and downy mildew are priorities this week, and keep an eye out for Phytophthora.

Cucumber Beetles – Harvanta is now labelled for use on this pest on cucurbits: 1.2L of product/ha, max 3 applications per crop per year, minimum 7 days between treatments. 1 day Pre-Harvest Interval. Keep in mind that this product is toxic to bees so should be avoided while the crop is in bloom, if necessary during bloom, Harvanta should be applied after flower petals have closed in the evening. Follow restrictions for use of Group 28 insecticides on the label. An updated label showing this new use will be available shortly. Cucumber beetle flushes have been continuous this summer, increasing the risk of bacterial wilt.

Figure 2. Clockwise from top left: underside of cucumber leaf showing dark cucurbit downy mildew (cdm) sporangia – Simcoe 21 July, intermediate cdm symptoms – Canborough 17 July, Cucumber beetle on pumpkin flower, Ridgetown July 17, advanced cdm on pickling cucumber -Canborough 17 July.

Downy Mildew – Downy mildew continues to circulate in many parts of Southwestern Ontario, and in American states around the Great Lakes. Damage can be severe if crops are not protected (Figure 2). Spray recommendations can be found in 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/)). We are continuing to track the epidemic, and if you are observing symptoms of downy mildew on any crops including melons, pumpkin, and squash we would be interested in hearing from you.

Phytophthora – be on the lookout for Phytophthora in cucurbits and other crops starting this week. Examine low lying or poorly drained areas and note any wilted or stunted plants, and look for lesions. Phytophthora usually presents as a foliar blight or a crown rot in zucchini, squash, and pumpkin, so look for dark lesions on the crown. In cucumbers and melons Phytophthora usually causes fruit and stem lesions so look for water soaked lesions with white spores developing on the fruit. Biosecurity is always a priority, this is a good reminder to clean equipment and boots if moving between fields. Please contact Andrew Wylie andrew.c.wylie@ontario.ca or Katie Goldenhar – Pathologist-Horticulture katie.goldenhar@ontario.ca if you observe symptoms resembling Phytophthora.

Garlic – Harvest is underway and finished across most of the province. Avoid leaving harvested bulbs in direct sun after they have been pulled. 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, generally, the longer it will last.

Onions – The degree day threshold has been reached for the second flight of onion maggot for much of the province and higher numbers are being seen on sticky cards in the field. Stemphylium, purple blotch, pink root and onion smut have also been observed. Refer to the newsletter from June 25(https://onvegetables.com/2020/06/25/2020vcr-9/) on information about Stemphylium. Dig up wilted plants and closely observe rots to find the cause With the hot, dry weather be on the lookout for thrips.

Figure 3. Stunted onion plant infected with Onion Smut.

Figure 4. Onion plants affected by Bacterial Rot.

Peppers – Peak flight of European corn borer (ECB) has begun in bivoltine, univoltine and overlap regions. Currently, adult moths are mating and depositing eggs. Continue to monitor for adults and scout for larval entry holes in the peppers. As of Thursday, July 23th 2020, no pepper weevil have been caught on any outdoor traps in SW Ontario.

Potatoes – Risk of blight is higher as the weather shifts to cooler overnight temps, longer dews and the vines collapse causing canopies to stay wet. No reports of late blight North of North Carolina have been reported yet this season. Flushes of potato leafhoppers have been found in some fields causing hopperburn symptoms to show up. Look for rolled upwards leaves and brown scorched tips (Figure 5.). Check for adults and nymphs on the underside of the leaves (Figure 6.). Tarnished plant bug have also been found in some fields. Look for wilted leaflets, especially the end leaves and adults in the field (Figure 7.).

Figure 5. Hopperburn symptoms on potato plant.

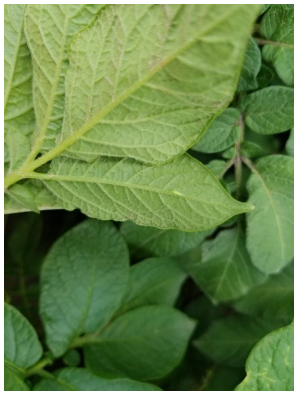


Figure 6. Aster Leafhopper on underside of leaves.

Figure 7. Wilted leaf tips as a result of Tarnished Plant Bug damage.

Figure 8. Adult Tarnished Plant Bug.

Sweet corn – Sweet corn harvest is underway in some areas. See last week's VCR(https://onvegetables.com/2020/07/16/2020vcr-12/) for the various pests that should be scouted for and check out the Great Lakes and Maritime Pest Monitoring Network(https://ontarioca11.maps.arcgis.com/apps/MapSeries/index.html?appid=df7c044f224e4345825e75d1fa561560) for up-to-date pest levels.

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. There are no reports of late blight on tomato or potato in Ontario or anywhere in the Great Lakes Region. If you suspect late blight in your tomatoes, please reach out to Cassandra Russell (Cassandra.russell2@ontario.ca, 519-350-7134) to confirm the diagnosis.

NOTE: Data as of July 22nd, 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*	**1535**	**1412**	**1089**	**911**	**675**	1189	1412	830
Chatham-Kent*	**1401**	**1284**	**987**	**819**	**561**	1078	1284	740
Norfolk**	1393	**1277**	**967**	**800**	**545**	1062	1277	721
Huron***	1202	**1102**	**836**	**676**	**438**	**919**	**1102**	600
Wellington**	1202	**1096**	**827**	**672**	**442**	**910**	**1096**	599
Simcoe County***	1218	**1114**	**849**	**694**	**466**	**933**	**1114**	621
Durham***	1311	**1203**	**921**	**763**	**522**	1006	1203	688
Peterborough	1174	**1066**	**791**	**633**	**400**	**875**	**1066**	559
Kemptville***	1286	**1181**	**902**	**746**	**512**	986	1181	673
Sudbury***	1085	999	**767**	**631**	**417**	839	**999**	566

*- 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/2020/07/23/2020vcr-13/#essex)

Chatham-Kent County(https://onvegetables.com/2020/07/23/2020vcr-13/#chatham-kent)

Norfolk County(https://onvegetables.com/2020/07/23/2020vcr-13/#norfolk)

Huron County(https://onvegetables.com/2020/07/23/2020vcr-13/#huron)

Wellington County(https://onvegetables.com/2020/07/23/2020vcr-13/#wellington)

Simcoe County(https://onvegetables.com/2020/07/23/2020vcr-13/#simcoe)

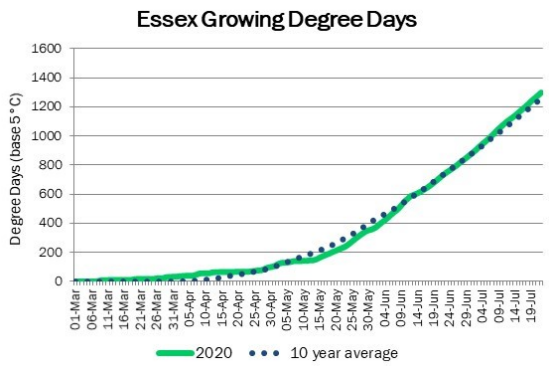
Durham County(https://onvegetables.com/2020/07/23/2020vcr-13/#durham)

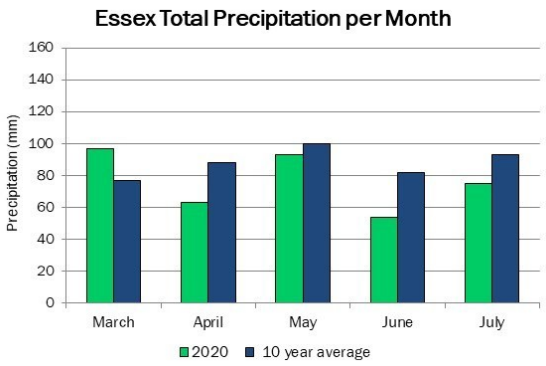
Peterborough(https://onvegetables.com/2020/07/23/2020vcr-13/#peterborough)

Kemptville(https://onvegetables.com/2020/07/23/2020vcr-13/#kemptville)

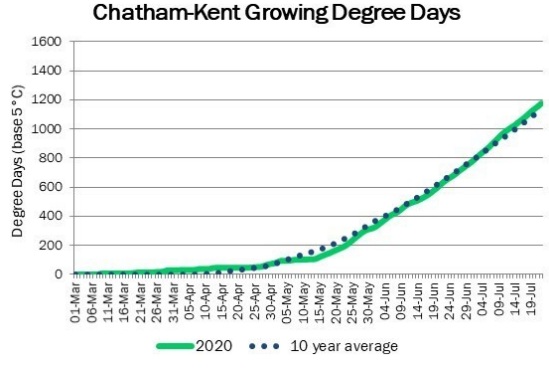
Sudbury(https://onvegetables.com/2020/07/23/2020vcr-13/#sudbury)

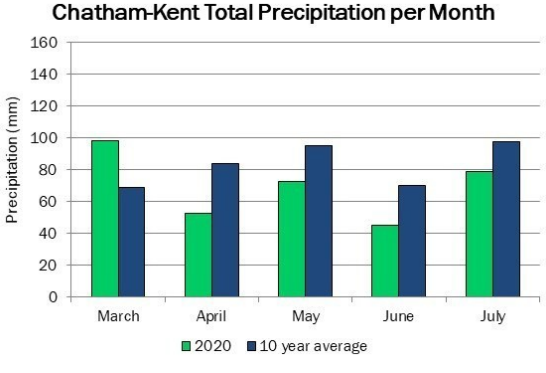
Essex County



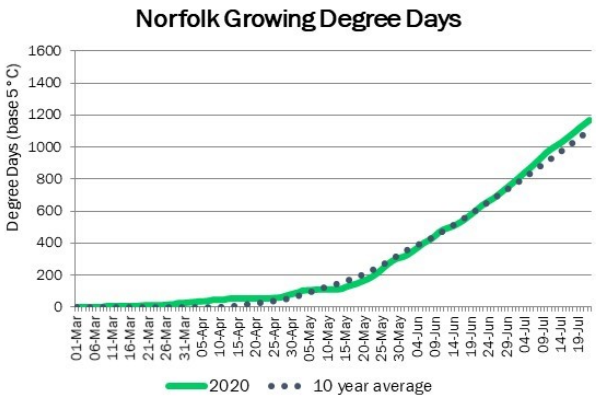


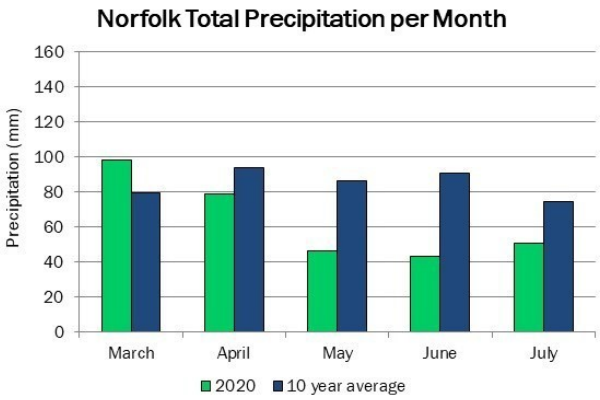
Chatham-Kent County



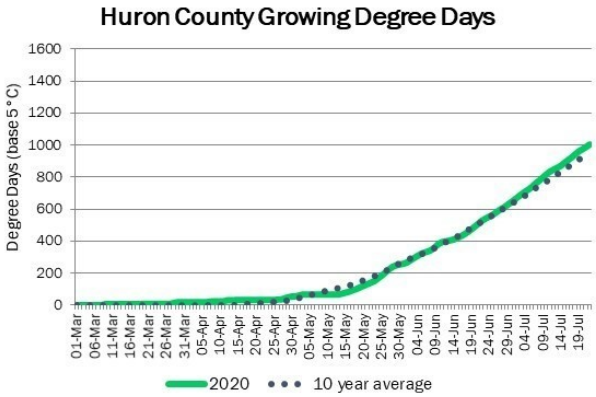


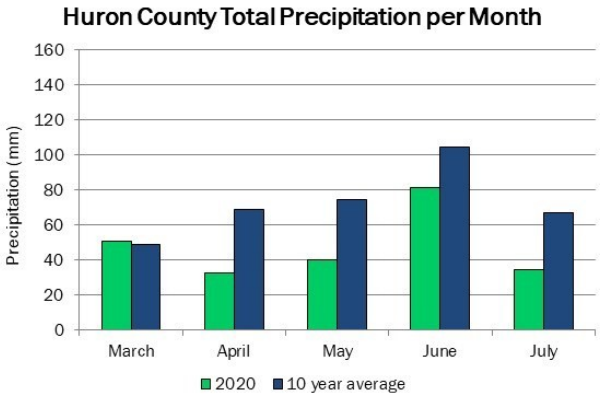
Norfolk County



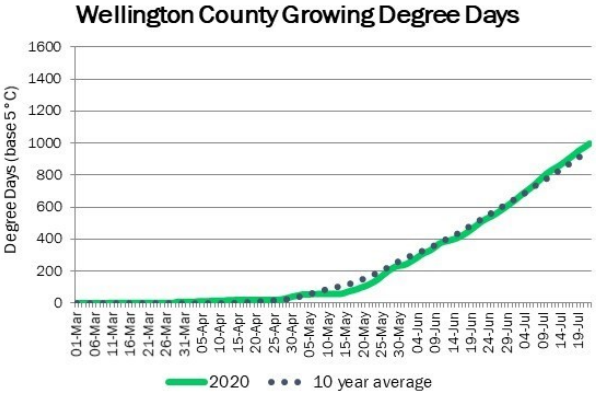


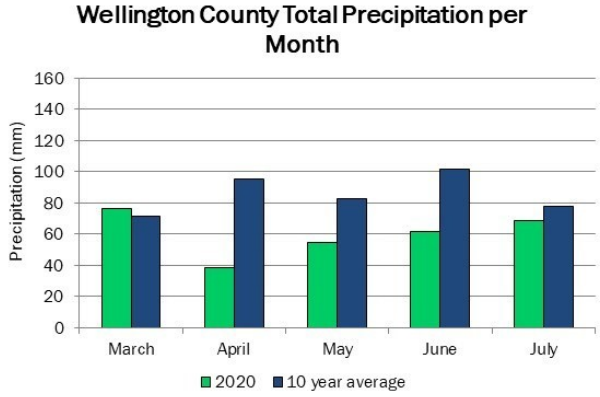
Huron County



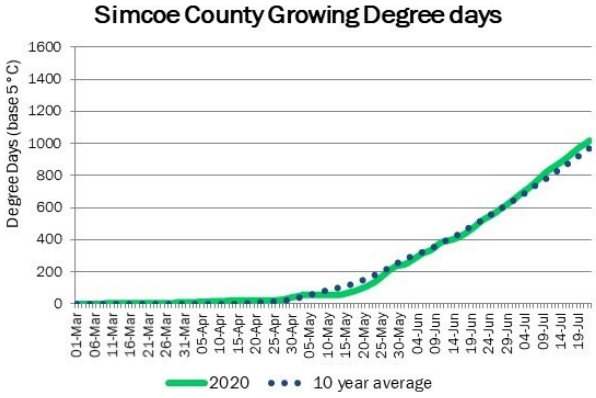


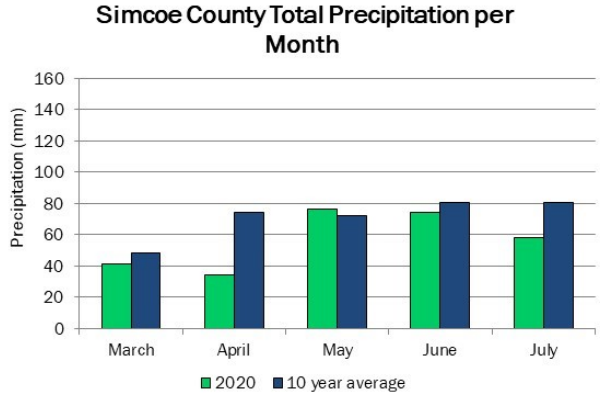
Wellington County



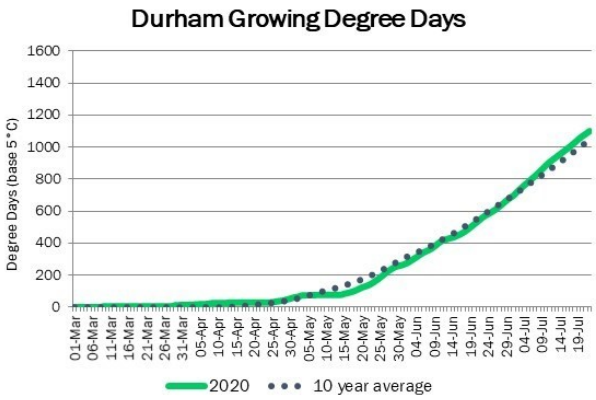


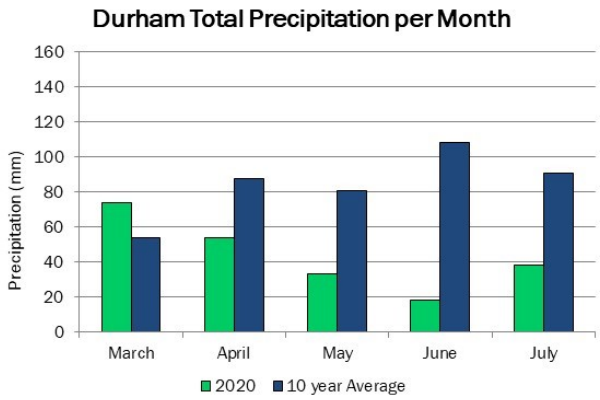
Simcoe County



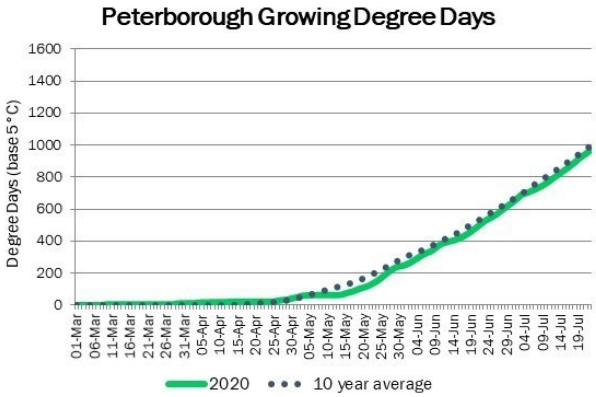


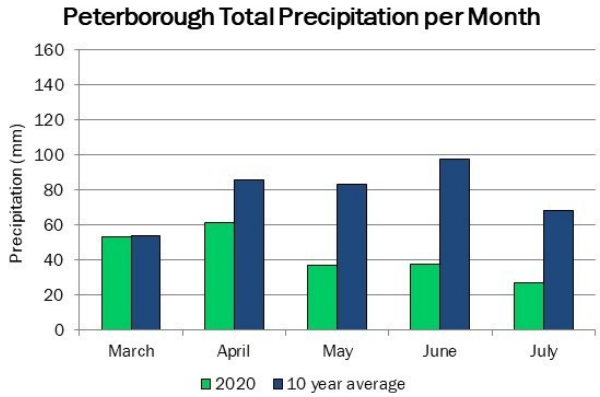
Durham County



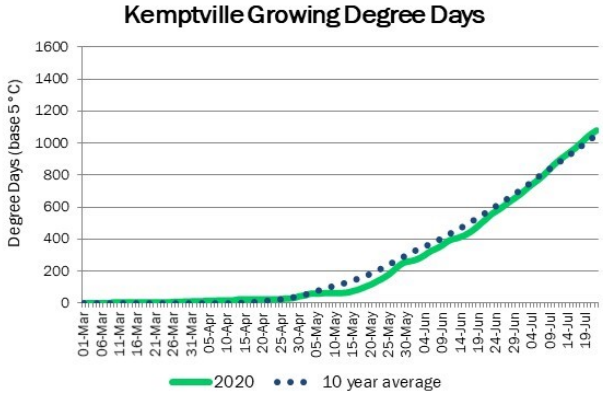


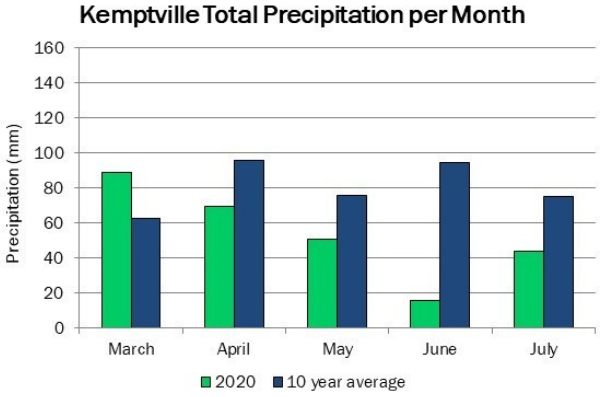
Peterborough





Kemptville





Sudbury