
Tuesday, June 22, 2021


## OMAFRA Vegetable Team:

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

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

Elaine Roddy, Ridgetown
519-401-5890
elaine.roddy@ontario.ca

Amanda Tracey, Ridgetown
519-350-7134
amanda.tracey@ontario.ca


## "In This Issue"



# Cover Crop Webinars


### Making Cover Crops Pay

The OMAFRA Soil Team, in partnership with Soils at Guelph, Grain Farmers of Ontario and the Ontario Soil and Crop Improvement Association, are hosting a series of free webinars on cover crops starting later this month.

The webinars will run over the lunch hour and will feature an OMAFRA specialist or University of Guelph researcher, as well as farmer speakers. The focus is on making cover crops pay. CEU credits will be available for each event and time for questions and answers will be built in to each session.

**Part 1: Maximizing Manure.** Friday June 25th, 12:00-1:00pm. Register at uoguel.ph/ccw-manure
**Part 2: Managing Weeds.** Tuesday, June 29th, 12:00-1:00pm. Register at uoguel.ph/ccw-weeds
**Part 3: Making Forage.** Tuesday, July 6th, 12:00-1:00pm. Register at uoguel.ph/ccw-forage

# Downy mildew identified in Kent County cucumbers, 17-June-2021

Cucumber scouts near Chatham, ON identified downy mildew symptoms in a cucumber field, and it was confirmed by Dr. Cheryl Trueman at the University of Guelph this afternoon.

This is a earliest we have seen downy mildew in a number of years. As the plants in most areas are still very small, many grower will not have started their preventative fungicide programs. **Now that the disease has been confirmed in Ontario, fungicides should be applied as soon as possible**!

See the article, Cucurbit Downy Mildew – get out and scout! – ONvegetables(https://onvegetables.com/2021/06/10/cucurbit-downy-mildew-get-out-and-scout/), for information about fungicide selection.

Given the early start to the 2021 cucurbit downy mildew season, growers and scouts are encouraged to inspect all fields for CDM, regardless of the crop stage. Look for angular "water-soaked" lesions on the older leaves. These lesions are often most noticeable in the morning, and may simply look like the dew has been slow to dry. The angular shape of the lesions is characteristic. Later in the day, new lesions will begin to dry and turn yellow-to-tan. Under humid conditions, grey mildew hyphae with enbedded spores may be visible on the lower leaf surface.

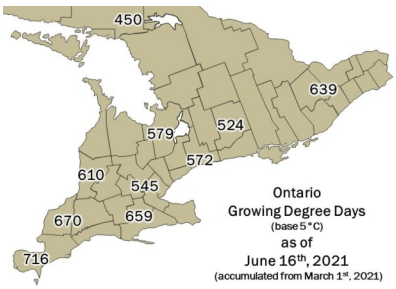
The 2021 downy mildew scouting program is funded by the Ontario Processing Vegetable Growers and is delivered in Kent County by Tomecek Ag Services.

Water soaked lesions on cucumber – note the characteristic angular shape

Early stages of CDM on the upper leaf surface

# VCR – Vegetable Crop Report – June 17th, 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.




**Announcements** – Downy mildew was identified in a cucumber field in Kent County on June 17, 2021(https://onvegetables.com/2021/06/18/vcr2021-5/#cucumber) for more details).

The Weather Dashboard has been updated for 2021 and allows anyone to see daily updates on Growing Degree Days, precipitation, and pest thresholds for many different regions. You can access the dashboard from: https://onvegetables.com/weather-dashboard/.

**Temperature** – Day temperatures are forecasted to stay around the mid-'20s for most regions until Tuesday, June 22nd where temperatures will be in the high teens.

Nighttime temperatures are forecasted to be in the low to high teens for most regions. The recent few days of relatively mild weather have resulted in the growing degree days for most regions trending more towards their respective 10-year averages. However, most regions are still ahead of their 10-year average by 80-120 Degree days.

**Rainfall** – Most regions are forecasted to have some showers over the weekend with thunderstorms forecasted for many regions on Monday. With a lack of rain over the past week in many regions, the month of June could possibly fall below its 10-year average in many regions.

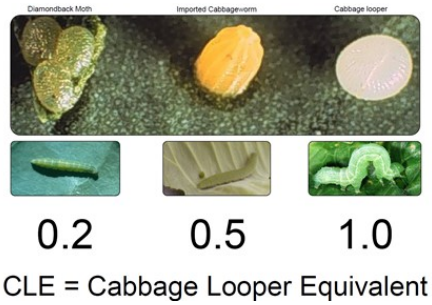
**Crop Updates**

**Asparagus** – As fields finish harvest, start a regular scouting program. At least once a week. Watch for symptoms of rust and Stemphylium in the lower 24" of the canopy. Fungicide selection will depend on which disease is present, as many of the options will control one but not the other. Also scout for asparagus beetle larvae.

**Brassica Crops** – With imported cabbageworm and diamondback moth larvae active, thresholds for management can be used to determine if action should be taken. 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 **not in piles** | -Ragged holes and dark green frass **in piles** |
| Relative Damage (Cabbage Looper Equivalent) | 0.2 | 0.5 | 1.0 |




**Carrots** – Carrots have germinated surprisingly well considering the drier conditions in many regions. Seeing some reports of heat canker. Carrot weevils continue to be active in most regions of the province. Ensure you're monitoring for Aster leafhoppers using sticky cards or sweep nets and keep an eye out for aster yellows symptoms in the crop.

**Celery** – Aster leafhopper, carrot weevil (**Figure 1 and 2**), and tarnished plant bugs are active. 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.

**Figure 1**. Dig up wilted plants and look for carrot weevil larvae – June 15, 2021

**Figure 2**. Carrot weevil larvae in the base of a celery plant – June 15, 2021

**Cucurbits** – Downy mildew was identified in a cucumber field in Kent County on June 17, 2021. This is an unusually early start to the downy mildew season. Start a preventative fungicide program as soon as possible. For more details see https://onvegetables.com/2021/06/17/downy-mildew-identified-in-kent-county-cucumbers-17-june-2021/.

We are seeing varying levels of cucumber beetle activity. They are a main concern prior to bloom, when feeding on the leaves can transmit the bacterial wilt pathogen. After bloom, they tend to congregate on the blossoms, which is a lower risk of disease transmission. Keep in mind that the post-emergence herbicide, Sandea, must be applied prior to bloom. It offers good control of pigweed escapes but is less effective on emerged lamb's quarters. For most cucurbit crops, the time to begin a preventative fungicide program is before the vines begin to close over. This is a good time to get thorough coverage of the plant before diseases establish deep in the canopy. Fungicide selection will vary based on the primary disease(s) affecting the crop.

- Cucumbers – downy mildew
- Cantaloupe – downy mildew, Alternaria, anthracnose
- Watermelon – Alternaria, anthracnose
- Pumpkins and Squash – powdery mildew

**European Corn Borer** – Based on growing degree day calculations, both Chatham-Kent and Norfolk Counties have reached peak flight for the first generation moths. In the univoltine areas, moths should begin emerging within the next week.

**Garlic** – Leek moth is entering its second peak flight and damage to larvae is being observed across the province. Management strategies are most effective when they are applied roughly a week after the peak number of adults have been trapped. As scapes are being harvested, be on the lookout for damage and cocoon that are often on the stem or underside of the leaves. The second generation of seedcorn maggot has begun in most counties. Dig up plants that show signs of stress and inspect the roots and basal plate for damage.

**Legume vegetables** – Watch for bean leaf beetles in snap beans. Overwintering adults are currently laying eggs. Once hatched the larvae will feed on the roots for a month, at which time the first generation adults will emerge. During vegetative growth stages, the threshold is 20% defoliation. During pod-set and filling it drops to 10%. Feeding on the pods is the primary concern in snap beans. (**Figure 3**)

**Figure 3.** Bean leaf beetle

**Onions** – Direct seeded onions are reaching the 5th leaf stage in many areas and transplants are really starting to take off. Damage due to onion maggot, wireworms and millipedes is being observed. The starting populations for thrips are likely to be high this year with the dry and hot weather we have been experiencing (**Figure 4**). Past research has shown that Movento 240 SC (group 23) has some residual activity that works better against larvae when it is applied earlier in the season. If the spray threshold exceeds 3 thrips/leaf, Movento 240 SC could be followed by two applications of Delegate (group 5) or Agri-Mek (group 6). Using a penetrating surfactant can be useful to maximize the effectiveness of products against thrips. 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. Cutworms are sporadic but causing damage in some areas.

**Figure 4**. Count the number of onion thrips on 10 plants and divide this total by the average number of leaves. The application threshold is 3 thrips per leaf.

**Potatoes** – The crop is looking good in the SW part of the province with many early fields finishing flowering and bulking nicely. The remaining areas of the province are emerging and establishing well. Overwintering Colorado Potato Beetle adults are now active in most areas of the province. Keep an eye out for orange egg masses laid on the underside of the leaves (**Figure 5**.). The SW regions of Ontario have already seen egg hatching and various stages of larval development. If you are targeting larvae with foliar sprays, make sure you're targeting the earlier instars (**Figure 6**.). Scouting is key to properly time sprays. Leafhoppers numbers have been elevated this season and with first cuts coming off in many areas, keep an eye out for a flush of leafhoppers entering potato fields.

With a dry season so far in many areas of the province, it has made weed control interesting. Not only have pre-emerge herbicides not activated well but there is a lack of soil moisture for weeds in the top of the profile to germinate. Perennial weeds like sow thistle and nutsedge that can source water from lower in the soil have taken advantage this season. There are pretty limited options to control these tough weeds within the crop year, the best way to deal with them is in rotation.

**Figure 5**. Colorado Potato Beetle eggs on underside of potato leaves – June, 2021

**Figure 6**. Colorado Potato Beetle larvae on Potato leaves – June, 2021

**Sweet corn** – Actively scout all fields for worm feeding damage and/or eggs as soon as it reaches the mid-whorl stage. The threshold for armyworms at this stage is 10% damage. For corn borer, the threshold is 5% eggs or feeding injury. Look for pinhole and windowpane feeding as the first signs of damage (**Figure 7**).

**Figure 7**. Windowpane damage on leaves of sweetcorn

**Pest Degree Day Forecasting**
*NOTE: Data as of June 3rd, 2021

| 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* | 918 | 829 | **578** | **445** | **295** | 655 | 829 | 390 |
| Chatham-Kent* | 839 | 752 | **522** | **398** | **235** | 593 | 752 | **345** |
| Norfolk** | 820 | **735** | **506** | **382** | **221** | 578 | **735** | **327** |
| Huron*** | 763 | **685** | **480** | **368** | **219** | 541 | **685** | 320 |
| Wellington** | 702 | **621** | 417 | **307** | **170** | 479 | **621** | 260 |
| Simcoe County*** | 743 | **660** | 444 | **331** | **192** | 509 | **660** | 283 |
| Durham*** | 727 | **646** | 426 | **321** | **181** | 492 | **646** | 276 |
| Peterborough | 681 | 598 | 385 | **280** | **151** | 449 | 598 | 235 |
| Kemptville*** | 799 | **715** | **481** | **355** | **201** | 554 | **715** | 303 |
| Sudbury*** | 580 | 513 | 347 | **265** | **147** | **396** | 513 | 227 |

*- 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

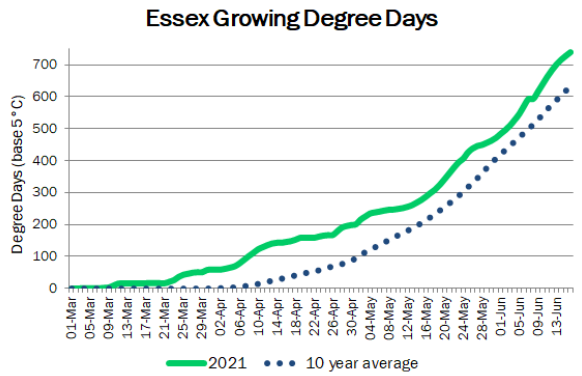
# VCR – Vegetable Crop Report – June 17th, 2021…con't

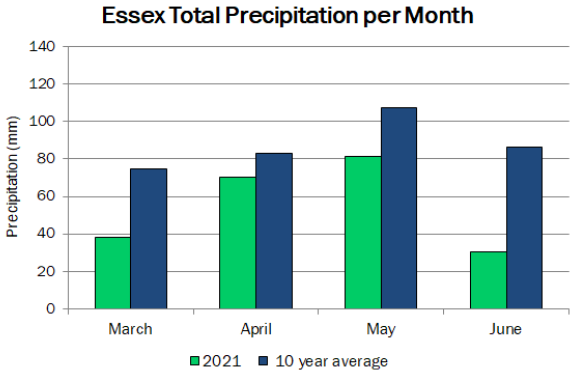
**Use these thresholds as a guide, always confirm insect activity with actual field scouting and trap counts.**

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

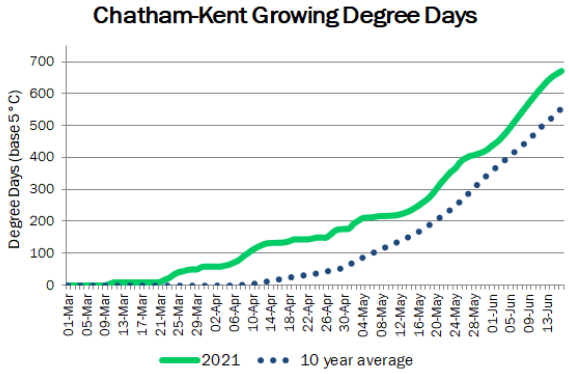
Essex County(https://onvegetables.com/2021/06/18/vcr2021-5/#essex)
Chatham-Kent County(https://onvegetables.com/2021/06/18/vcr2021-5/#chatham-kent)
Norfolk County(https://onvegetables.com/2021/06/18/vcr2021-5/#norfolk)
Huron County(https://onvegetables.com/2021/06/18/vcr2021-5/#Huron)
Wellington County(https://onvegetables.com/2021/06/18/vcr2021-5/#wellington)
Simcoe County(https://onvegetables.com/2021/06/18/vcr2021-5/#simcoe)
Durham County(https://onvegetables.com/2021/06/18/vcr2021-5/#durham)
Peterborough(https://onvegetables.com/2021/06/18/vcr2021-5/#peterborough)
Kemptville(https://onvegetables.com/2021/06/18/vcr2021-5/#kemptville)
Sudbury(https://onvegetables.com/2021/06/18/vcr2021-5/#sudbury)

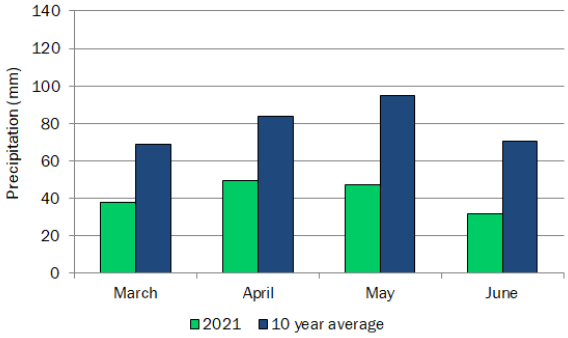
Essex County



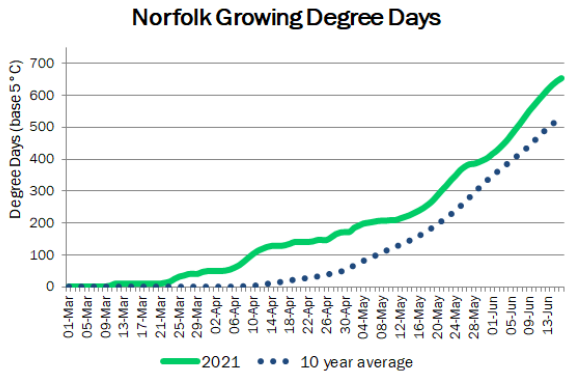



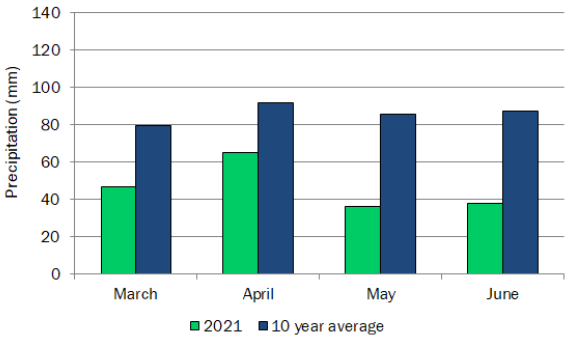

Chatham-Kent County




Norfolk County



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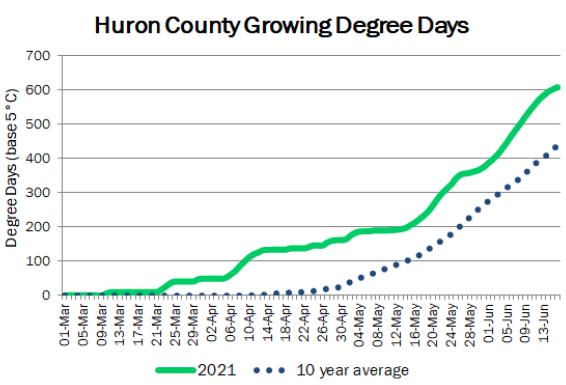
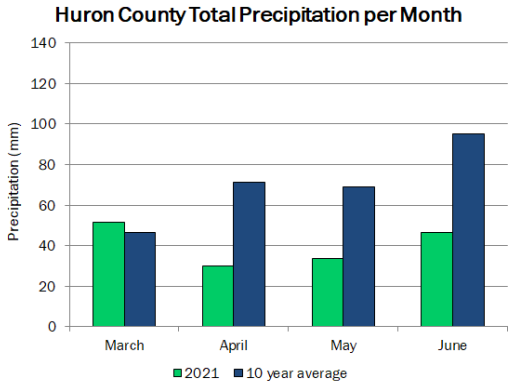
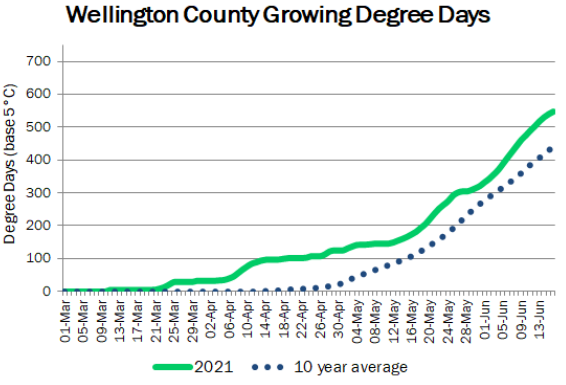
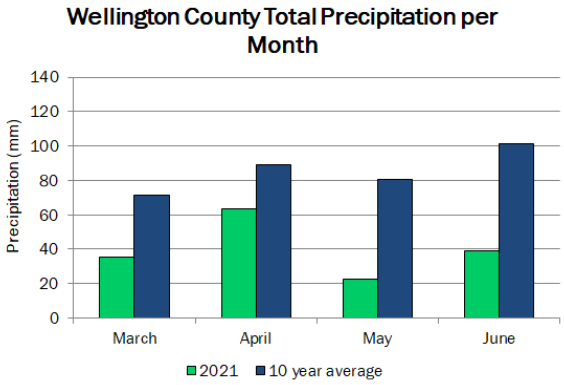
## Huron County



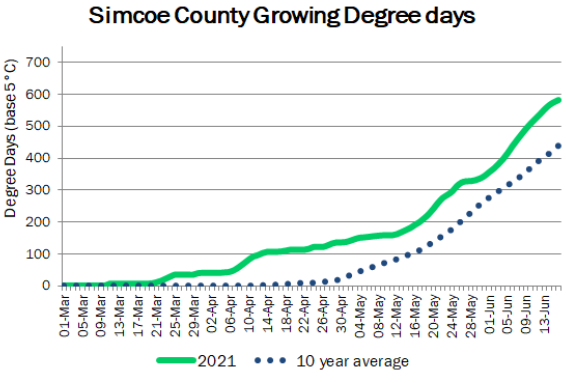



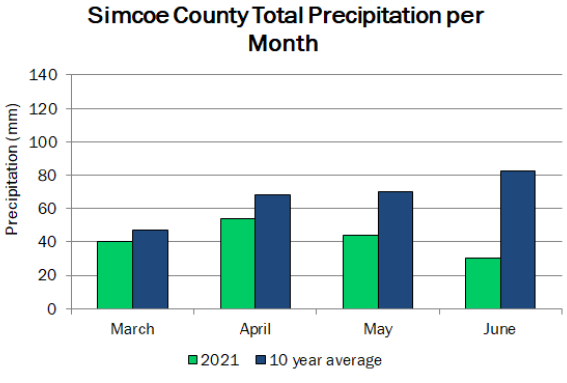

## Wellington County



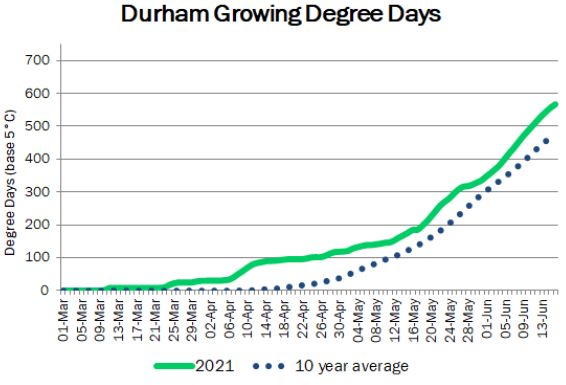



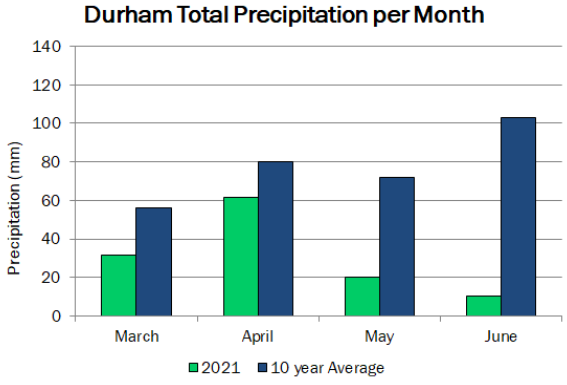

## Simcoe County



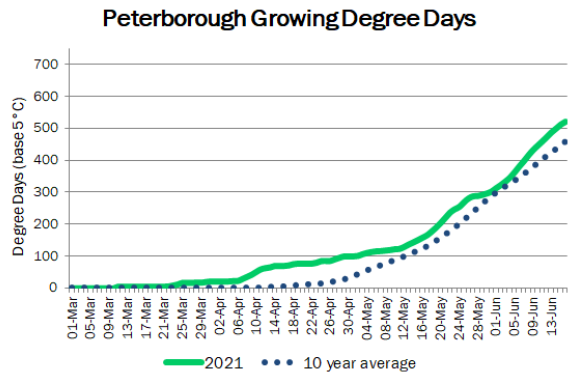



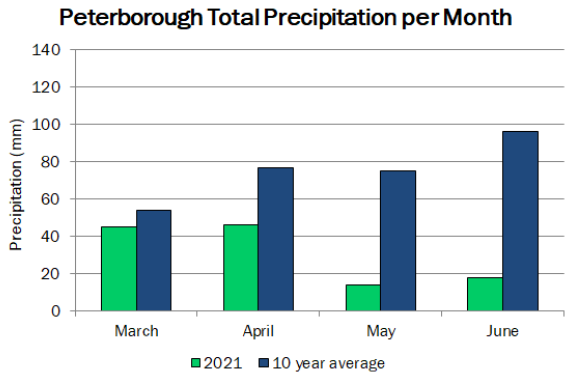

## Durham County



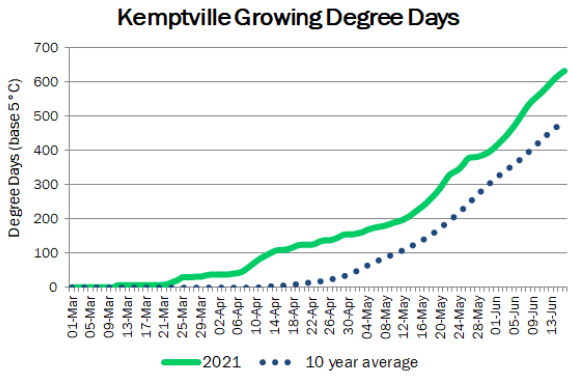



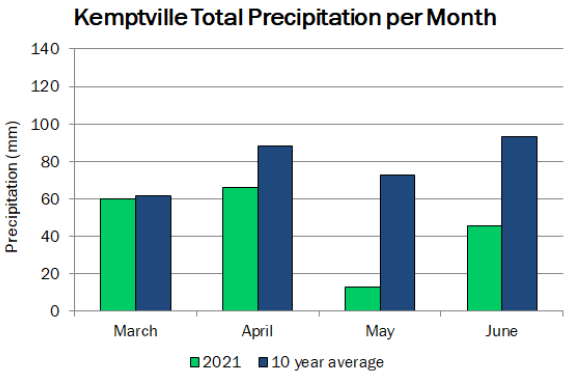
Peterborough




Kemptville




Sudbury