Tuesday, July 02, 2024

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"In This Issue"

Cucurbit downy mildew identified in Norfolk County

Cucurbit downy mildew has been confirmed in Norfolk County. This is the first report in Ontario for 2024. Cucumber and cantaloupe growers should switch to downy mildew targeted fungicides for the rest of the season.

The following article, originally posted in 2022, outlines information on downy mildew identification, scouting and fungicide selection.

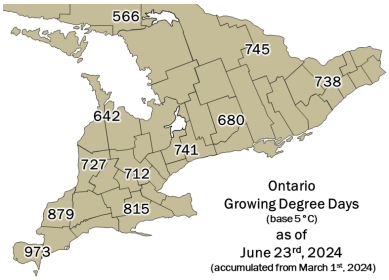
Cucurbit downy mildew – get out and scout!(https://onvegetables.com/2022/06/14/cucurbit-downy-mildew-get-out-and-scout-2/)

Leaf of a cucurbit downy mildew infected plant.

VCR – Vegetable Crop Report – June 27, 2024

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.

Welcome to this week's VCR! All counties continue to trend above their 10 year average GDD.



Crop Updates

Brassica Crops – Harvest continues for broccoli, cabbage and kale with early cauliflower fields starting soon. High amounts of rainfall the past week will mean that conditions are more favourable for Alternaria (**Figure** 1). Reference the Ontario Crop Protection Hub(https://cropprotectionhub.omafra.gov.on.ca/control-solutions/crop-protection-vegetables) to determine what products are registered for Alternaria depending on the specific Brassica crop that you are growing. Switch 62.5 WG fungicide(https://onvegetables.com/2023/07/07/switch/) is registered for suppression of Alternaria on head Brassicas as an Emergency Use Registration (EUR) until July 7th, 2024. Early detection and management of Alternaria will reduce potential inoculum later in the season. Alternaria resistance has been documented in other regions outside of Ontario and it is important to rotate FRAC groups after every Alternaria application. The degree day threshold for the second generation of cabbage maggot has been surpassed in Essex and shortly in Chatham-Kent, Norfolk and Lambton. Dig up wilted plants and look for the root cause, whether it's cabbage maggot, clubroot, nematodes or some other factor.

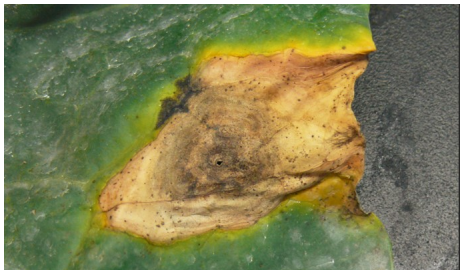


Figure 1. Alternaria lesion on an older cauliflower leaf developing circular rings within the leaf lesion.

Celery – Plants are establishing well. Aster leaf hoppers are active and in some fields the numbers are reaching the lower threshold of 10 leafhoppers/card. Scout and rogue plants showing yellow leaves/symptoms of aster yellows. It is unknown what percentage of aster leafhoppers may contain the aster yellows phytoplasma, but it is early in the season and the percent infected is likely to be low. If suspicious plants showing symptoms of aster yellows are found in or around the field, and the level of leafhoppers is high, it may be time for an insecticide application. Dig up stunted and/or wilted plants and inspect roots for nematode cysts, or carrot weevil larvae or if plants were unable to establish properly after transplanting due to a lack of adequate moisture.

Cucurbits – Cucurbit downy mildew has been confirmed in Norfolk County. This is the first report in Ontario for 2024. Cucumber and cantaloupe growers should switch to downy mildew targeted fungicides for the rest of the season.

The following article, originally posted in 2022, outlines information on downy mildew identification, scouting and fungicide selection.
https://onvegetables.com/2022/06/14/cucurbit-downy-mildew-get-out-and-scout-2

Figure 2. Leaf of a cucurbit downy mildew infected plant.

Garlic – Most areas have finished scaping and many fields are showing leaf tips starting to senesce. Some fields with early-maturing cultivars are ready to harvest. Witches broom (**Figure 3** – Where multiple shoots are growing from a primary stem) has also been a major concern this year in some fields in Essex, Huron, Lincoln and Wellington counties, and it is primarily only found in porcelain cultivars, such as Music. The fields with close to all of the plants showing witches broom had 2% or higher organic matter and could be classified as loam, clay loam or heavy clay. In each of these fields, all of the locations had extended periods of soil saturation. While they may not have been standing water in these fields, there were extended periods where the top layer of soil was never able to dry out. This excess moisture may have resulted in the plant growing extra cloves outside of the main bulb and as these cloves are forming, their leaves are extending up the stem and emerging at the same place where the scape emerged over the past 3 weeks. Garlic rust has been prevalent this year with the high humidity and prolonged periods of leaf wetness. Garlic rust often starts first in sections of the field that are near windbreaks due to the lack of wind (and potentially sun) drying out the crop. Aprovia and Aprovia Top are registered for garlic rust on garlic – OCPH Garlic x Garlic Rust(https://cropprotectionhub.omafra.gov.on.ca/control-solutions/crop-protection-vegetables?cs=e16e7e0f-d53b-4a76-8e9d-7318d075467d&pe=54030411-44d0-46e6-83ec-78e91f2d8f33&vw=cardRowsForPrint). In future years, avoid planting in the headlands or areas of the field that are shaded. If the crop can be planted so that the rows are parallel to the predominate winds, this may also allow the field to dry out faster after morning dews or rainfall events. The second flight of leek moth is active, and larvae will be hatching from eggs soon. Pay special attention to fields that are senescing, as leek moth larvae will follow the green tissue down into the bulb if they are actively feeding near harvest.

Figure 3. Fields with witches brooming where multiple leaves are emerging from the top of the stem. Grower submitted photo, June 13, 2024.

Onions – The largest direct seeded onions are reaching the 7th-8th leaf stage while most fields are still around the 5-6th leaf stage with transplant onions starting to form bulbs. The threshold for the next generation of onion maggot has been reached in the counties of Essex and Chatham-Kent, and other southern areas will likely reach this threshold later in the week. The level of thrips continue to be low, but are likely to reach threshold within the next two weeks. 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 as the first insecticide. Once the threshold of thrips/leaf has been reached, Movento 240 SC (two applications) could be followed by two applications of Agri-Mek (group 6) or Delegate (group 5). Entrust (group 5), Success (group 5), and Exirel (group 28) are also registered. 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. Stemphylium leaf blight has been detected and has been observed in transplants. If Penflufen was part of the seed treatment, do not start with a foliar group 7 fungicide. For the first application, a product containing mancozeb (group M3s, such as Manzate Pro-Stick, Dithane Rainshield, and Penncozeb 75 DF Raincoat) may provide protection against Stemphylium if it is being applied to manage onion smut, Botrytis or Alternaria/Purple Blotch. Avoid applying products from the same chemical group one after the other to manage Stemphylium. For the second foliar product, Allegro 500F (group 29) or products containing a group 7 show the best efficacy, such as Sercadis, Aprovia, or Miravis Duo (group 7/3). Research has shown that there is very high resistance in Stemphylium to one of the fungicides in Quadris Top (group 11/3) and in Luna Tranquility (group 7/9). Avoid applying products(https://cropprotectionhub.omafra.gov.on.ca/control-solutions/crop-protection-vegetables?cs=c8ec4444-e4d6-4545-8751-85e8a6ae245b&pe=62988971-400b-4c6f-8ffd-b2301f588e40&vw=cardRowsForPrint) from the same chemical group one after the other to reduce the selection pressure against group 7 or group 29 fungicides so that they can be used to manage Stemphylium for future years.

Pest Degree Day Forecasting

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
Bruce***	862	769	**527**	**387**	**217**	601	769	326
Essex*	1229	**1123**	**837**	**670**	**443**	**927**	**1123**	592
Chatham-Kent*	1125	1024	**752**	**596**	**379**	837	**1024**	519
Norfolk**	1063	961	**682**	**526**	**324**	769	961	454
Huron***	960	862	**598**	**448**	**272**	681	862	381
Wellington Centre**	941	844	**592**	**448**	**265**	669	844	382
Wellington North**	926	831	**581**	**441**	**266**	660	831	376
Simcoe***	917	822	**572**	**427**	**251**	650	822	360
Durham***	977	878	**617**	**468**	**279**	699	878	400
Peterborough	907	811	**560**	**414**	**236**	639	811	350
Kemptville***	972	875	**630**	**487**	**301**	705	875	421
Sudbury***	753	**673**	**464**	**343**	**193**	529	**673**	287
Timiskaming***	736	**662**	**463**	**346**	**205**	525	**662**	293
Lambton**	1091	993	**721**	**564**	**362**	807	993	491
Thunder Bay	577	**501**	308	**206**	**86**	**365**	501	161
Middlesex**	1104	1002	**726**	**567**	**360**	813	**1002**	495
Renfrew	974	879	**635**	**498**	**316**	710	879	434

*- 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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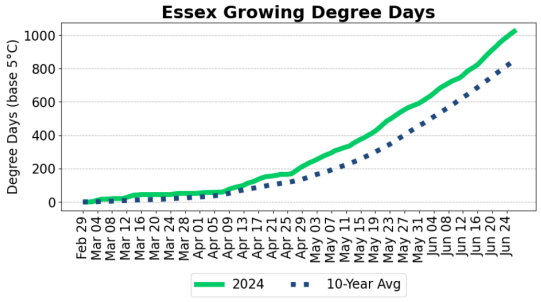
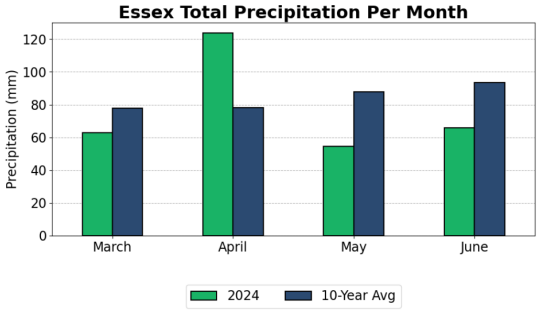
Use these thresholds as a guide, always confirm insect activity with actual field scouting and trap counts
Select a region below for the latest weather, crop and pest degree day information:

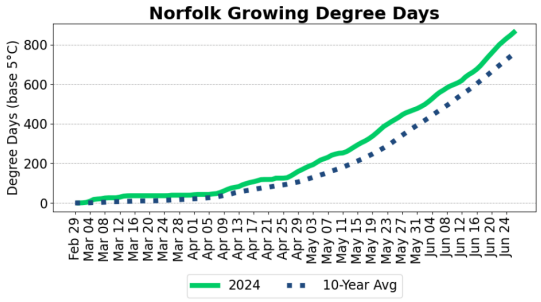
Bruce(https://onvegetables.com/2024/06/27/vcr2024-9/#BruceLink)
Chatham-Kent(https://onvegetables.com/2024/06/27/vcr2024-9/#ChathamKentLink)
Durham(https://onvegetables.com/2024/06/27/vcr2024-9/#DurhamLink)
Essex(https://onvegetables.com/2024/06/27/vcr2024-9/#EssexLink)
Huron(https://onvegetables.com/2024/06/27/vcr2024-9/#HuronLink)
Kemptville(https://onvegetables.com/2024/06/27/vcr2024-9/#KemptvilleLink)
Lambton(https://onvegetables.com/2024/06/27/vcr2024-9/#LambtonLink)
Middlesex(https://onvegetables.com/2024/06/27/vcr2024-9/#MiddlesexLink)
Norfolk(https://onvegetables.com/2024/06/27/vcr2024-9/#NorfolkLink)
Peterborough(https://onvegetables.com/2024/06/27/vcr2024-9/#PeterboroughLink)
Renfrew(https://onvegetables.com/2024/06/27/vcr2024-9/#RenfrewLink)
Simcoe(https://onvegetables.com/2024/06/27/vcr2024-9/#SimcoeLink)
Sudbury(https://onvegetables.com/2024/06/27/vcr2024-9/#SudburyLink)
Thunder Bay(https://onvegetables.com/2024/06/27/vcr2024-9/#ThunderBayLink)
Timiskaming(https://onvegetables.com/2024/06/27/vcr2024-9/#TimiskamingLink)
Wellington Centre(https://onvegetables.com/2024/06/27/vcr2024-9/#WellCentreLink)
Wellington North(https://onvegetables.com/2024/06/27/vcr2024-9/#WellNorthLink)

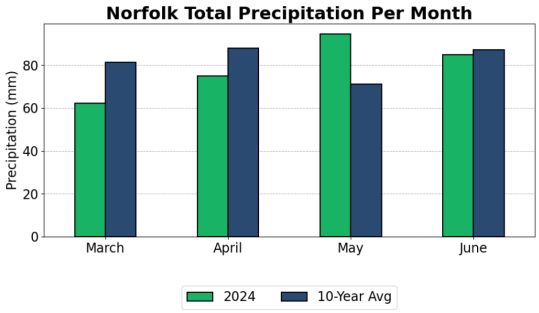
Essex



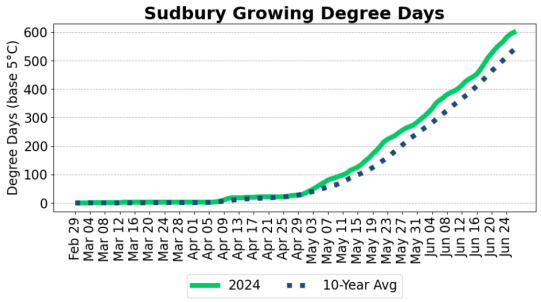


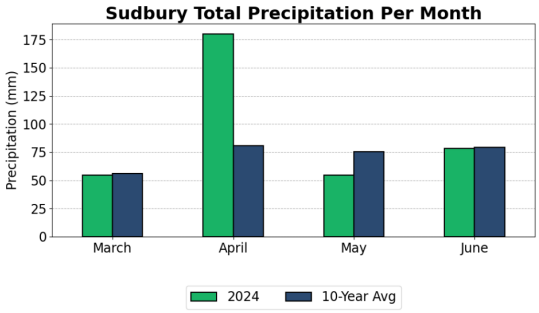
Norfolk



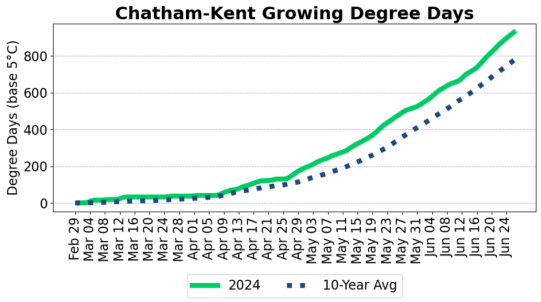


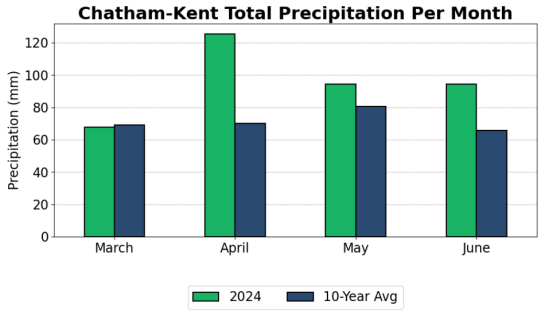
Sudbury



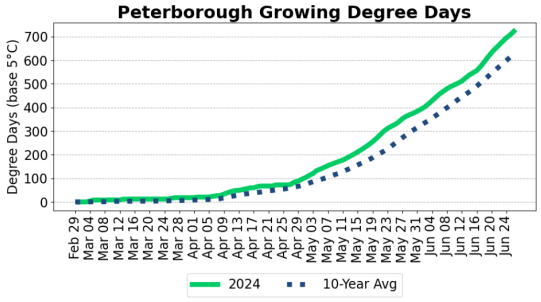


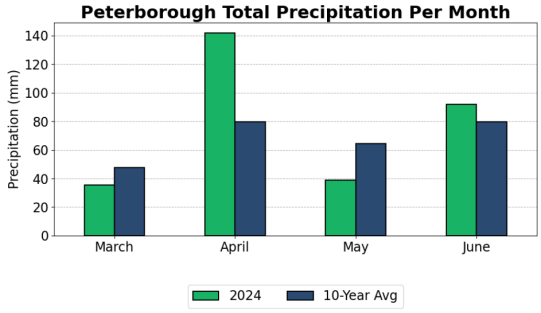
Chatham-Kent



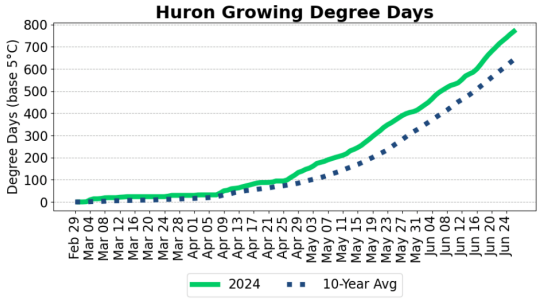


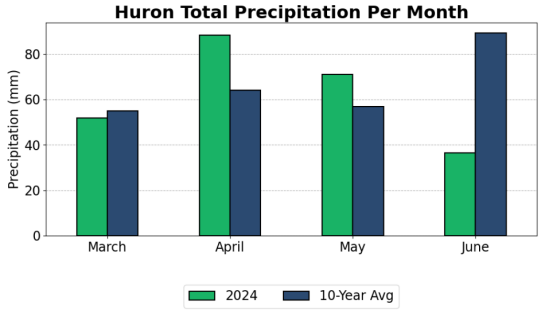
Peterborough



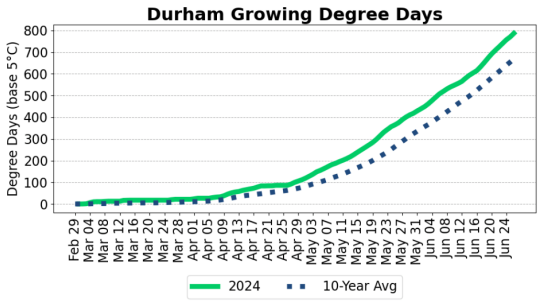


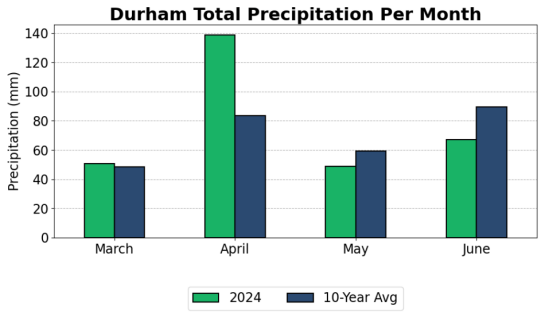
Huron



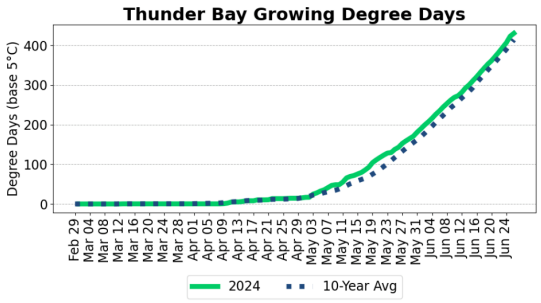


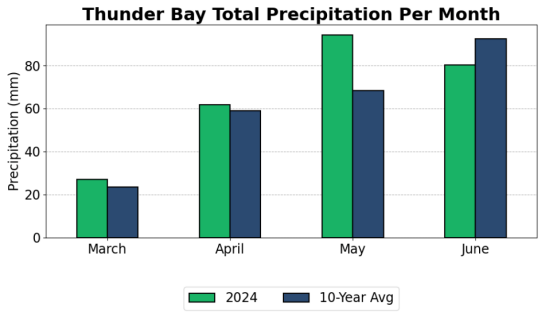
Durham



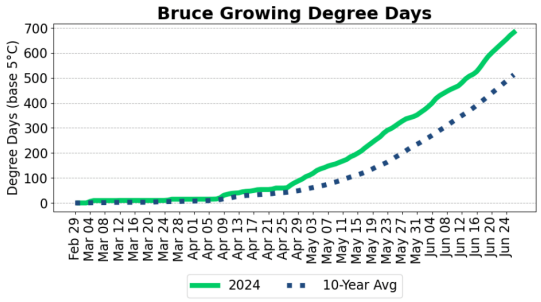


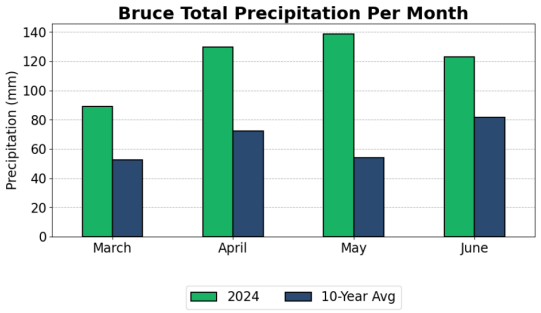
Thunder Bay



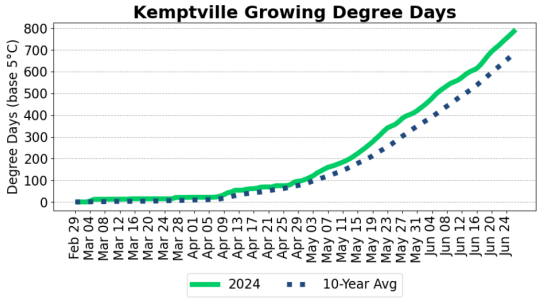


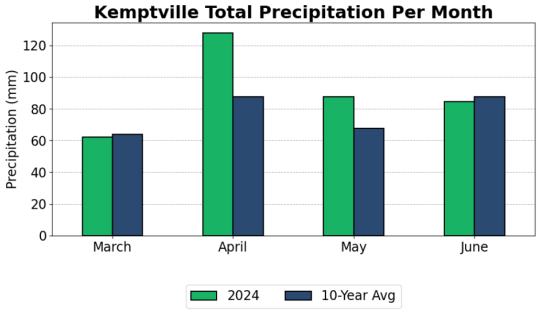
Bruce



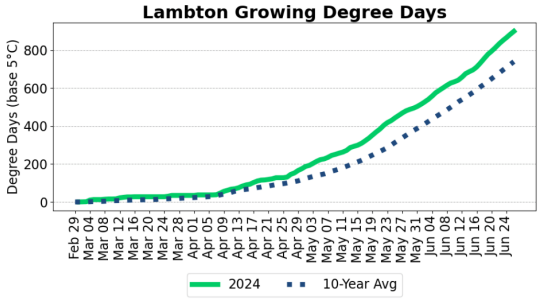


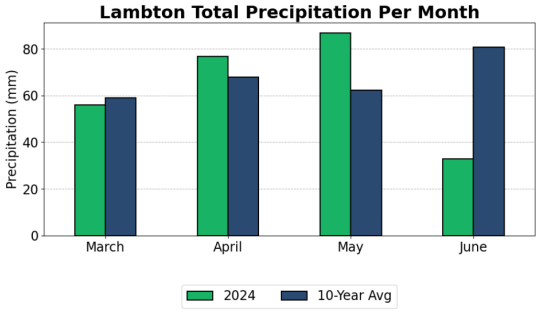
Kemptville



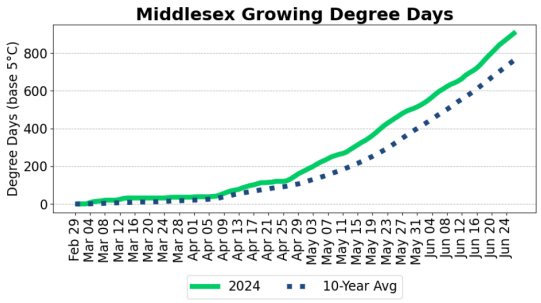


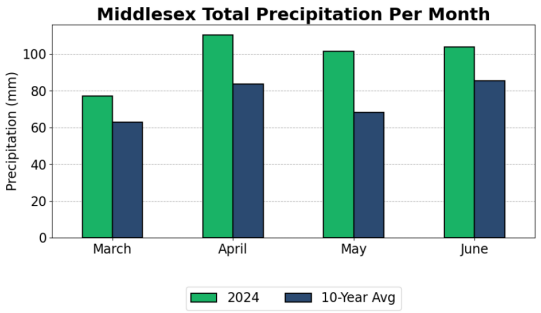
Lambton



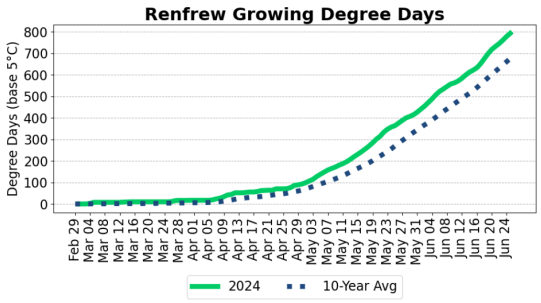


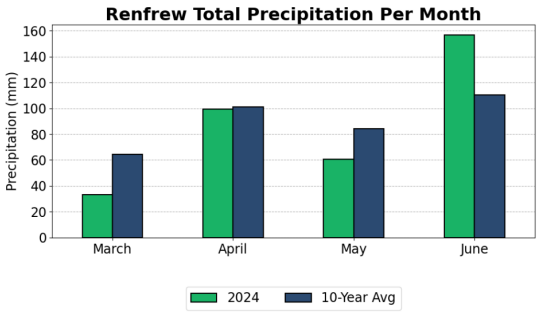
Middlesex





Renfrew





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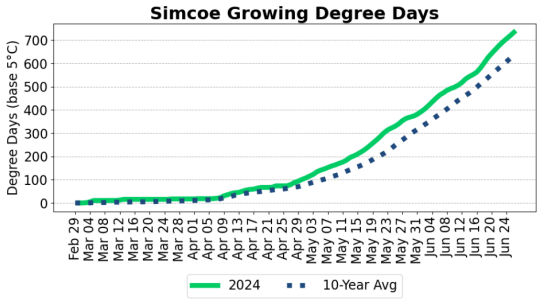
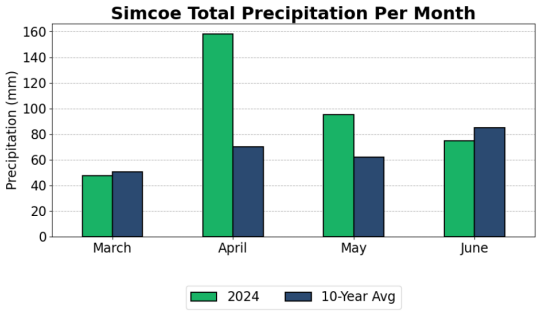
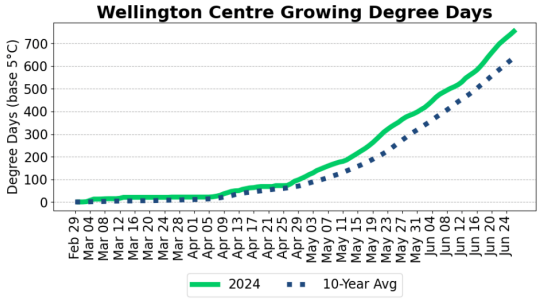
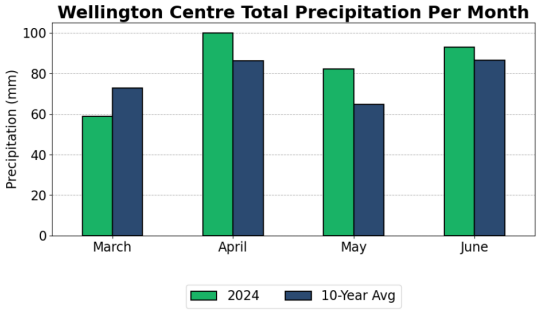
Simcoe



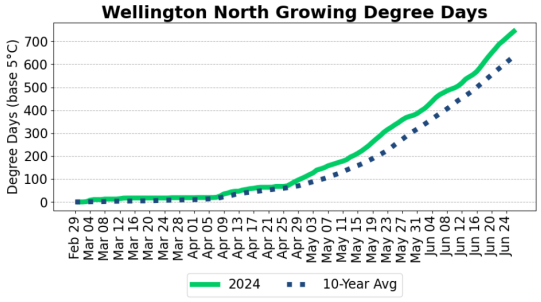


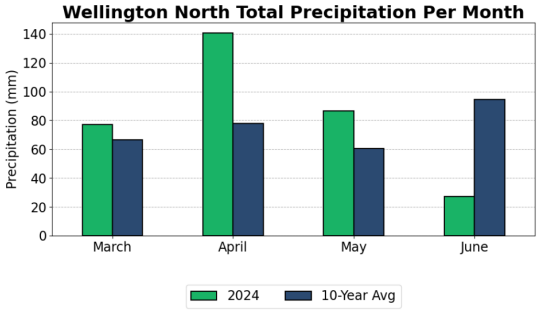
Wellington Centre





Wellington North





Timiskaming