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"In This Issue"

 VCR – Vegetable Crop Report – June 4, 2020

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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 – Growing Degree Days still lag marginally behind in many regions but are ontrack to catch up with the 10 year average value. Temperatures may cool slightly over the weekend but high temperatures will return into the next week across Ontario. Onion maggot, Asterleaf hopper, and Tarnished Plant Bug thresholds have been triggered in all regions. Carrot Rust fly thresholds have been triggered in Huron, Wellington, Simcoe counties, Peterborough, and Kemptville. Cabbage Maggot has been triggered in Essex county. Seedcorn maggot is at threshold in most counties excluding Essex, Chatham-Kent, and Norfolk which have all passed the first peak. Degree day data for each region is shown below.

Rainfall – All regions fell behind 10-year average values except for Simcoe county which surpassed its 10-year average rainfall for May. Some rain showers or thunderstorms may occur over the weekend and toward the end of next week. Sudbury may see scattered showers throughout the week. Precipitation data for each region is shown below.

Ministry of Agriculture, Food and Rural Affairs



Crop Updates

Asparagus – Warm temperatures led to rapid spear emergence which produced a large quantity of asparagus in a short time. Last week's fluctuating temperatures have encouraged Stemphylium purple spot in many areas, some fields have high incidence. Begin scouting immediately after harvest is complete to determine when a spray program will need to be initiated. Fusarium and Phytophthora symptoms have been observed in some areas: early symptoms were difficult to differentiate from the extensive frost damage that we saw recently. Begin scouting for beetles.



Figure 1 – Stemphylium purple spot. June 3rd, 2020.

Beans & Peas – Peas are already in flower in several areas, and many beans have been planted.

Brassica Crops – Transplants are establishing well and putting up new leaves. If transplants have leaves cut off in the field around the soil line, dig around the plant and look for cutworm larvae (Figure 2B). It appears that cutworm damage is high this year. Wilted plants may be due to millipede (Figure 2A) or seedcorn maggot damage and if the leaves are purple, the wilt may be due to wirestem, caused by Rhizoctonia (Figure 2C). Adult click beetles and flea beetles are active and the first generation threshold for cabbage maggot emergence has been reached in Essex county.



Figure 2 – Scout for transplant damage from millipedes (A), cutworms (B) or pathogens like wirestem caused by Rhizoctonia (C). June 3rd, 2020.

Carrot – With the bulk of carrot acres seeded, many growers are irrigating to achieve good germination with the dry conditions that are being seen in some areas. With the stretch of hot weather, we saw a lot of heat canker and dying off from hot soil conditions despite frequent irrigation in some cases. Carrot weevil is active and laying eggs. There are reports of high black cutworm pressure this year from New York and some have been seen in Ontario. Monitor your fields for plants that look like they've been cut by scissors.





Heat canker damage to the taproot at the soil level due to high soil temperatures. Picture Courtesy of Patricia Kloepfer

Figure 3 – Heat canker killing a young carrot.

Celery – Aster leafhopper and tarnished plant bugs are active and thresholds have been reached in all regions.

Cucurbits – Large amounts of cucumbers have been planted, and pumpkin production is planned to proceed as per normal in Southwestern Ontario. Transplanted cucurbits were host to large emergences of striped cucumber beetle, so vine crops attractive to beetles such as zucchini, squash, and pumpkin should be scouted for these. It's not too late to transplant trap crops such as zucchini or some squash cultivars: if you'd like a full list of varieties that make good cucumber beetle trap crops, email Andrew and he will send you one. Be on the lookout for herbicide injury due to warm temperatures in susceptible cultivars.

Garlic –Plants are starting to send out the scape leaf and the scapes on 'Music' are starting to emerge. Scapes will likely emerge in most regions over the next 5-10 days. Irrigation may be required for bulbs to size well in areas that have had little precipitation over the past month. Continue to scout for damaged leaves as this will likely be due to leek moth damage. Leek moth leaves what looks similar to sawdust on the top of the leaves (Figure 3). Depending on the area, the second flight of leek moth will be active over the next two to three weeks. Use sticky cards with lures to monitor populations, and target the second generation of larvae a week after the peak flight.



Figure 3 – Look for feeding damage caused by leek moth on leaves that is similar look as sawdust. June 2^{nd} , 2020

Leafy Greens – Cutworm pressure is higher than average this season and leafy greens that are grown from seed are at a greater risk. If leaves look like they were cut at the soil line in the field, dig up around the plant to look for cutworm larvae (Figure 4). The larvae comes out at night to feed, so if management strategies targeting this pest are implemented, it should be when the larvae are active and the product can make contact.



Figure 4 – Dig around seedlings where leaves have been cut at the soil line; there's a good chance damage is caused by night feeding of cutworm larvae

Onions –The degree day threshold for onion maggot has been reached in most growing areas. Some onions showing signs of heat scald or herbicide damage. Control volunteer onions in neighbouring fields as this can be a source for fungi inoculum like Stemphylium (Figure 5) or pests like onion thrips. Black cutworms are active and can cause damage that looks like the onion has been cut with scissors above the soil line (Figure 6). Dig around suspect plants to look for cutworm larvae.



Figure 5 – Volunteer onions act as a reservoir for thrips or pathogen spores like Stemphylium. June 2nd, 2020



Figure 6 – Black cutworm damage on direct seeded onion – 2018

Potatoes – Almost all the potato acres are planted. Most of the early seeded acres weathered the frost surprisingly well and enjoyed that stretch of hot weather. There are reports of high black cutworm pressure this year so monitor for any plants that look like they've been cut off or chewed stems near the soil level. If you dig around in the top inch or two of soil near a damaged plant you can often find the cutworm larvae curled up. At-plant insecticides should be taking care of overwintering Colorado potato beetle adults. Monitor your fields and keep an eye on any Colorado potato beetle populations that appear to be multiplying earlier than expected. It is never too early scout for late blight as any infected seed piece could cause problems early.



Figure 7 – Black cutworm larvae dug up from the ground around a damaged plant.

Sweet Corn – sweet corn is progressing normally.

NOTE: Data as of June 3, 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*	545	471	295	215	126	346	471	183
Chatham-Kent*	487	419	268	198	107	310	419	169
Norfolk**	484	416	254	185	97	299	416	155
Huron***	392	341	223	160	81	256	341	132
Wellington**	378	321	199	142	74	233	321	118
Simcoe County***	381	326	208	151	84	243	326	127
Durham***	412	353	218	158	82	254	353	132
Peterborough	389	330	202	143	72	237	330	117
Kemptville***	394	338	206	148	79	241	338	124
Sudbury***	294	257	172	133	76	195	257	115

*- 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/2020/06/04/2020vcr-6/#essex) Chatham-Kent County(https://onvegetables.com/2020/06/04/2020vcr-6/#chatham-kent) Norfolk County(https://onvegetables.com/2020/06/04/2020vcr-6/#norfolk) Huron County(https://onvegetables.com/2020/06/04/2020vcr-6/#huron) Wellington County(https://onvegetables.com/2020/06/04/2020vcr-6/#wellington) Simcoe County(https://onvegetables.com/2020/06/04/2020vcr-6/#simcoe) Durham County(https://onvegetables.com/2020/06/04/2020vcr-6/#durham) Peterborough(https://onvegetables.com/2020/06/04/2020vcr-6/#durham) Neterborough(https://onvegetables.com/2020/06/04/2020vcr-6/#kemptville) Kemptville(https://onvegetables.com/2020/06/04/2020vcr-6/#kemptville) Sudbury(https://onvegetables.com/2020/06/04/2020vcr-6/#sudbury)

Essex County





Chatham-Kent County



Chatham-Kent Total Precipitation per Month



Norfolk County



Huron County





Norfolk Total Precipitation per Month



Huron County Total Precipitation per Month



Wellington County







Wellington County Total Precipitation per Month 140 120 Precipitation (mm) 100 80 60 40 20 0 March April May June 2020 10 year average



Simcoe County Total Precipitation per

Durham County



Peterborough

Peterborough Growing Degree Days



Durham Total Precipitation per Month



Peterborough Total Precipitation per Month



Kemptville



Kemptville Total Precipitation per Month

Sudbury



Sudbury Total Precipitation per Month

