



Tuesday, April 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, Ridgeway  
519-401-5890  
andrew.c.wylie@ontario.ca

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

## OMAFRA Vegetable IPM Scout Training Workshops for 2020

Online scout training workshops for horticultural crops grown in Ontario

This year, workshops will be available online via zoom. **To register, please click the registration link under the specific workshop below.** Due to current physical distancing measures, workshops over the next month will be hosted online. If you are unable to view a workshop due to a slower internet connection, please contact the workshop leader below for an alternative format.

For all workshops, a laptop or computer with a display greater than 12" is strongly recommended. The workshops will be primarily using the Zoom platform. Some workshops may integrate Slido into the workshop as well, in which case a smart phone with internet connectivity is also recommended but not required.

### Introduction to IPM

**May 5th, 9:00 – 12:00**

This workshop covers topics, such as the importance of integrated pest management, disease causal agents, characteristics, symptoms and damage of different insects and mites, scouting for weeds in horticulture crops, pesticide safety, soil diagnostics, invasive species and farm visit biosecurity. It is an introductory course that covers the basic information that scouts need to know. Other scouting workshops will build on this information and will be tailored to the specific crops.

- Workshop Leader – Denise Beaton
- Link to video conference and pdf of workshop slides to be provided after registration
- Click here to register([https://zoom.us/join/join?secret=70vS\\_NY6V](https://zoom.us/join/join?secret=70vS_NY6V))

### Tomatoes and Peppers IPM Workshop

**May 6th, 9:00 – 12:00**

- Workshop Leader – Cassandra Russell
- Link to video conference and pdf of workshop slides to be provided after registration
- See Resources for Vegetable Crop Scouts(<https://onvegetables.com/2015/04/30/resources-for-vegetable-crop-scouts-2/>)
- Click here to register([https://zoom.us/join/join?secret=70vS\\_NY6V](https://zoom.us/join/join?secret=70vS_NY6V))

### “In This Issue”

- OMAFRA Vegetable IPM Scout Training Workshops for 2020
- ♦ Where in Ontario can you Grow Sweet Potatoes? Commercial Production of a Tropical Crop in the Great White North

# **OMAFRA Vegetable IPM Scout Training Workshops for 2020...con't**

## **Brassica Crops IPM Workshop**

**May 7th, 9:00 – 12:00**

- Workshop Leaders – Travis Cranmer / Dennis Van Dyk
- Link to video conference and pdf of workshop slides to be provided after registration
- See: Resources for Vegetable Crop Scouts(<https://onvegetables.com/2015/04/30/resources-for-vegetable-crop-scouts-2/>)
- Click here to register([https://zoom.us/meeting/register/tjUlf-2vqz8pE9zMgphOktNldcnTdUiuKP](https://zoom.us/join/zoom-join?url=https%3A%2F%2Fzoom.us%2Fmeeting%2Fregister%2FtjUlf-2vqz8pE9zMgphOktNldcnTdUiuKP))

## **Carrot & Celery IPM Workshop**

**May 12th, 9:00 – 12:00**

- Workshop Leader – Dennis Van Dyk / Travis Cranmer
- Link to video conference and pdf of workshop slides to be provided after registration
- See Resources for Vegetable Crop Scouts(<https://onvegetables.com/2015/04/30/resources-for-vegetable-crop-scouts-2/>)
- Click here to register([https://zoom.us/meeting/register/tJEvf-GtpjMoHt07NKK-xLscfQIZLaKZPBnN](https://zoom.us/join/zoom-join?url=https%3A%2F%2Fzoom.us%2Fmeeting%2Fregister%2FtJEvf-GtpjMoHt07NKK-xLscfQIZLaKZPBnN))

## **Onion IPM Workshop**

**May 14th, 9:00 – 12:00**

- Workshop Leader – Travis Cranmer
- Link to video conference and pdf of workshop slides to be provided after registration
- See Resources for Vegetable Crop Scouts(<https://onvegetables.com/2015/04/30/resources-for-vegetable-crop-scouts-2/>)
- Click here to register([https://zoom.us/meeting/register/tJMsc-CgrigvH9xao7zMwLqQq1-uthNAol3J](https://zoom.us/join/zoom-join?url=https%3A%2F%2Fzoom.us%2Fmeeting%2Fregister%2FtJMsc-CgrigvH9xao7zMwLqQq1-uthNAol3J))

## **Sweet Corn, Peas and Beans IPM Workshop**

**May 15th, 9:00 – 12:00**

- Workshop Leader – Andrew C. Wylie
- Link to video conference and pdf of workshop slides to be provided after registration
- See Resources for Vegetable Crop Scouts(<https://onvegetables.com/2015/04/30/resources-for-vegetable-crop-scouts-2/>)
- Click here to register([https://zoom.us/webinar/register/WN\\_pHiQo7iUQCmRMqYvHc-ag](https://zoom.us/join/zoom-join?url=https%3A%2F%2Fzoom.us%2Fwebinar%2Fregister%2FWN_pHiQo7iUQCmRMqYvHc-ag))

## **Cucurbit IPM Workshop**

**May 20th, 9:00 – 12:00**

- Workshop Leader – Andrew C. Wylie
- Link to video conference and pdf of workshop slides to be provided after registration
- See Resources for Vegetable Crop Scouts(<https://onvegetables.com/2015/04/30/resources-for-vegetable-crop-scouts-2/>)
- Click here to register([https://zoom.us/webinar/register/WN\\_teB3vaWuT1OD80WUiq0YNw](https://zoom.us/join/zoom-join?url=https%3A%2F%2Fzoom.us%2Fwebinar%2Fregister%2FWN_teB3vaWuT1OD80WUiq0YNw))

# **Where in Ontario can you Grow Sweet Potatoes? Commercial Production of a Tropical Crop in the Great White North**

**Melanie Filotas, Horticultural IPM Specialist, OMAFRA**

The sweet potato is a tropical plant native to Central and South America, with most commercial production occurring in warm regions with very long frost free periods. Given this, many people are surprised to learn that sweet potatoes are commercially grown in parts of Ontario, mostly along the northern shore of Lake Erie.



**Ontario sweet potatoes**

Recently, I have had a number of questions from people in other parts of Ontario, and elsewhere in Canada wondering whether sweet potatoes can be commercially produced in their area. There is no single answer to this question. The best thing to do is to review the growing requirements of the crop and determine whether conditions in your area are appropriate. Here are some things you should consider to determine if sweet potatoes are suited to your farm's growing conditions.

## **What are the environmental requirements of a sweet potato?**

Sweet potatoes require extended frost-free growing periods with long days and warm nights. They cannot tolerate freezing temperatures and should not be planted until all danger of frost has passed. Sweet potatoes are also easily damaged by exposure to chilling temperatures below 10-12°C for more than a few hours, and roots need to be harvested before soil temperatures drop below these levels. These factors combine to make the growing season in Ontario run typically from early June to September.

Other factors are also important, including soil type. In Ontario, sweet potatoes grow better on deep, fine sandy soils with relatively low levels of organic matter and clay content. While this influences shape of the roots, these soils also warm rapidly, which contribute to the successful production of sweet potatoes in Ontario.

The main questions to ask yourself are: (1) can you produce sweet potatoes of marketable size within the frost-free season in your area and (2) can you get your desired acreage harvested before soil temperatures drop to chilling levels?

## **Sweet potatoes do very well in my garden. Shouldn't I be able to grow more for commercial production?**

This is really a question of acreage and target markets. It's easy to harvest a few plants before chilling temperatures set in, particularly when root size and shape are not that important. It's another thing entirely to do this on a commercial scale. Consider how much you want to grow and how long it will take to harvest. Also consider whether your crop will be able to produce enough roots of a size and shape that is acceptable to your market within your growing season.



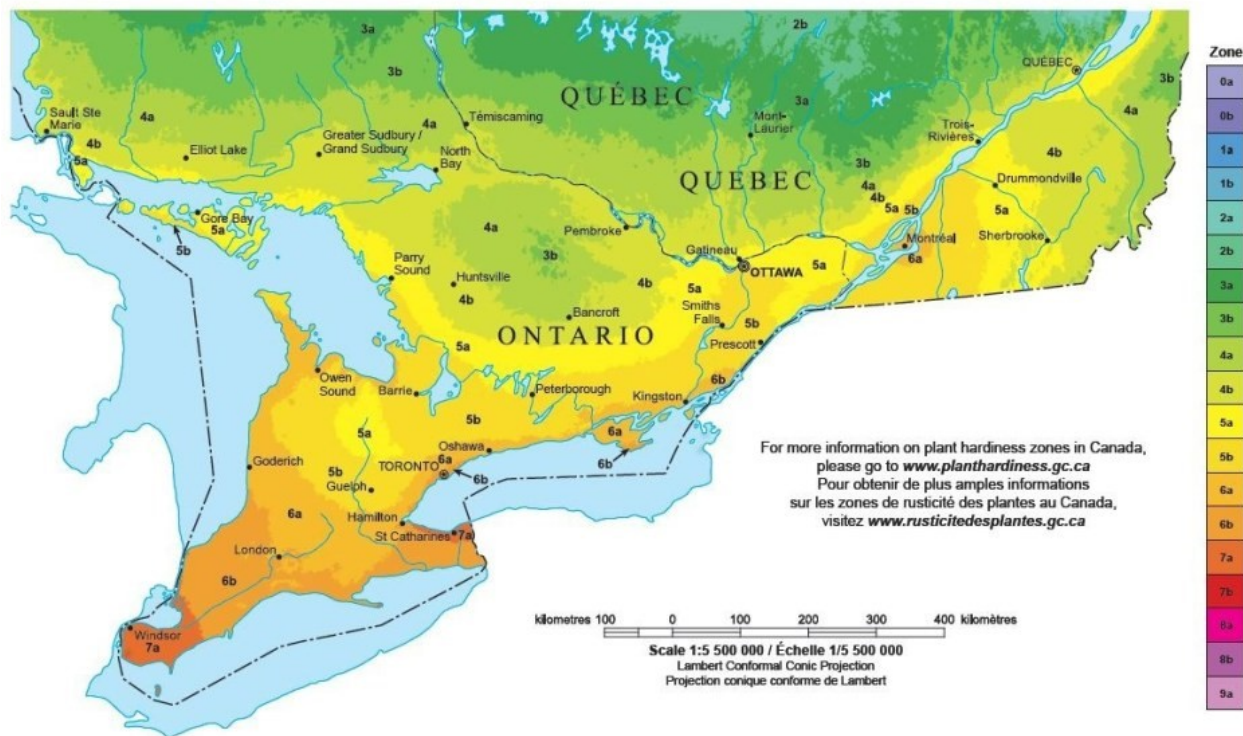
# Where in Ontario can you Grow Sweet Potatoes? Commercial Production of a Tropical Crop in the Great White North...con't

My plant hardiness zone is the same as that of the north shore of Lake Erie – can I grow sweet potatoes commercially?

An area's climate can be mapped in several ways, including hardiness zones, heat units and length of growing season, among others. Hardiness zones are based on winter hardiness, reflecting an area's minimum temperatures for perennial species such as trees. They are not appropriate for determining whether sweet potatoes, an annual crop produced only in the summer, can be produced in an area.



## Plant Hardiness Zones of Southern Ontario and Québec Zones de rusticité des plantes dans le sud de l'Ontario et du Québec



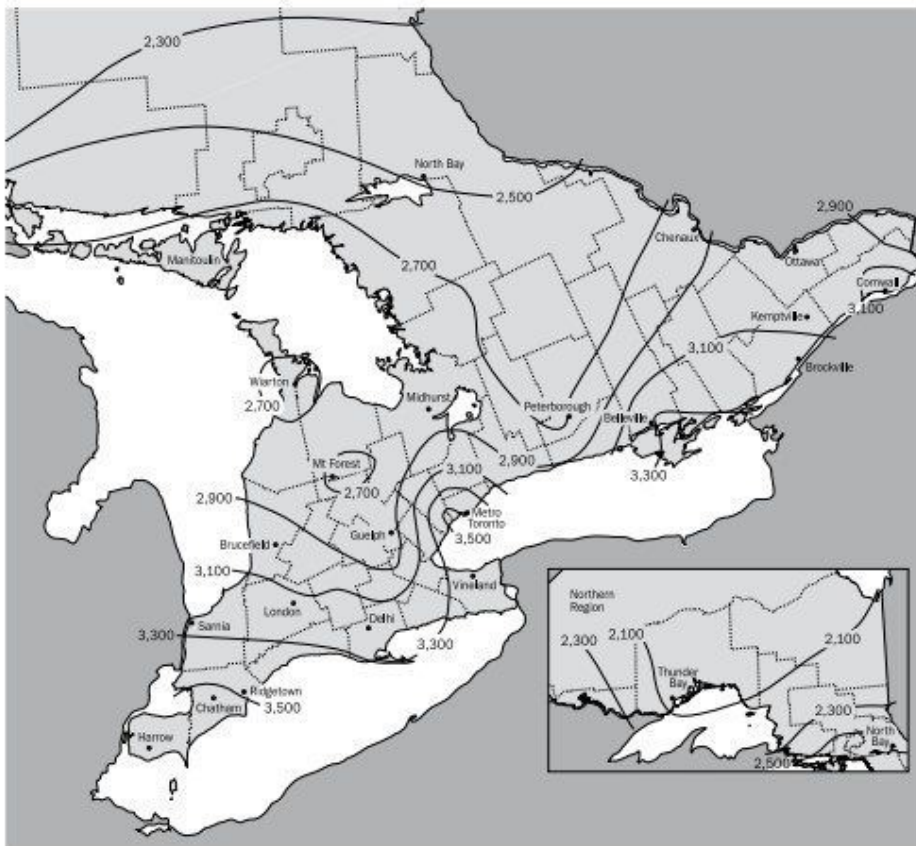
Research by / Recherche : D.W. McKenney, J.H. Pedlar, K. Lawrence, P. Papadopol, K. Campbell, M.F. Hutchinson  
Produced by / Production : R.E. Kromers, I. Rose, N. Morisset  
© Her Majesty the Queen in Right of Canada, as represented by the Minister of Natural Resources, 2014  
© Sa Majesté la Reine du chef du Canada, représentée par le ministre des Ressources naturelles, 2014



Plant hardiness zones are based on winter hardiness and are not appropriate for determining where sweet potatoes, an annual crop grown only in the summer, can be grown commercially

Crop heat units (CHUs), which use a mathematical calculation to describe daily accumulations of heat throughout the growing season, are more appropriate for use on annual vegetables. Originally developed for corn, heat units are calculated daily from planting to harvest using the daily maximum and minimum temperatures for a given area. A crop heat unit map for corn and other warm season crops in Ontario can be found in OMAFRA's Agronomy Guide for Field Crops (Publication 811) or on the OMAFRA website ([www.omafra.gov.on.ca](http://www.omafra.gov.on.ca)). Based on research done in southern Ontario, our best estimate is that commercial production of sweet potatoes requires 3000 CHUs or more. It may be possible to grow sweet potatoes with less heat but yields will be lower and more variable from year to year.

## Where in Ontario can you Grow Sweet Potatoes? Commercial Production of a Tropical Crop in the Great White North...con't



**Figure 1-1.** Crop heat units (CHU-M1) available for corn production.

This map is based on weather data from 1971–2000 with a common season start date across the province of May 1.  
Source: Weather Innovations Inc. (WIN)

Crop Heat Units (CHUs) are based on accumulations of heat during the growing season and are better suited to determining where sweet potatoes can be grown commercially. Our best estimate is that sweet potatoes require 3000 CHUs or more for commercial production.

### Does variety matter?

Absolutely. Most sweet potato cultivars available for commercial production are developed in the southern United States, where growing seasons are much longer, and consequently the majority require a minimum frost-free period of 100-125 days. However, there is considerable variation among cultivars. Short season cultivars such as Orleans and Beauregard, do better in northern regions. Covington, a very popular variety in much of the southern US, takes 110-120 days to mature in those regions. In southern Ontario, yields of Number 1 grade roots of Covington are excellent in warmer summers but can be much lower when summer temperatures are predominantly cool so this cultivar may not do as well in more northern regions of the province. Radiance is a new earlier maturing variety with higher yields at northern latitudes developed for Ontario by breeders at the Vineland Research and Innovation Center.

Ontario growers can experiment with longer season cultivars (e.g. 120 days), but there is a much higher risk of climate-induced crop failures. This is why most varieties of purple-fleshed sweet potatoes, which typically require more than 120 days to mature, are not grown on a large scale in Ontario – they typically cannot get enough heat within our growing season to get sufficient yields for commercial production.

# **Where in Ontario can you Grow Sweet Potatoes? Commercial Production of a Tropical Crop in the Great White North...con't**

## **Would plastic row covers help?**

Research from the United States and elsewhere has shown that season extension tools such as black plastic, clear plastic and row covers can be an effective means of increasing soil temperature, allowing sweet potatoes to mature faster in cooler areas. However there are costs associated with buying and disposing of the plastic, as well as any specialized planting equipment needed for such a system. Furthermore, removing soil-applied plastic mulch prior to harvest is problematic and expensive. You will have to factor in these associated costs to determine whether producing sweet potatoes under plastic or row covers is economical.

If you are interested in trying to grow sweet potatoes in a more northerly climate, start small. Grow an acre or two to determine whether roots reach marketable size in a reasonable time period in your area, and whether you can harvest the crop before the soil reaches chilling temperatures in the fall. Remember, temperature can fluctuate considerably from year to year. This can dramatically impact yield and, in some regions, you may be able to achieve economically viable yields only in certain years.