



You are invited to the Ontario Canola Growers
ANNUAL MEETING — Tues Jan 22, 2019
...see the speakers and agenda on page 3



Congratulations to Ontario's 2018 Canola Challenge Winners!



		Yield lbs/acre	Variety	Location
1 st	Jonathon Sammons Greg Hodgins - Holmes Agro	3761	InVigor L252	Shelburne
2 nd	James Hammerton Wade Graham—Alpine Plant Foods	3705	Mercedes Winter Canola	Woodstock
3 rd	Earl and Anne Schneider Luke Hartung - North Wellington Co-op	3587	InVigor L252	West Luther
4 th	Brian and Evan Besley Greg Hodgins - Holmes Agro	3401	InVigor L252	Shelburne
5 th	Jon and Brian Wiley Wayne Foster - Sprucedale Agromart	3392	InVigor L233P	Meaford
6 th	Don and Jeff Curry Ralph Voisin - Huron Bay Co-op	3372	InVigor L233P	Owen Sound
1st prize – \$2,000 2nd prize – \$1,000		3rd prize – \$750 4th, 5th and 6th – \$500		

Sponsors:





ANNUAL MEETING

Tuesday, January 22, 2019 — 9:30 am to 3:00 pm
Nottawasaga Inn, 6015 Highway 89, Alliston

Thanks to our Sponsors



Agricorp
Alpine Plant Foods
Bayer
GROWMARK
Holmes Agro
Northern Equipment
Wellington Co-op
Woodrill Farms

AGENDA

9:30 am	Can We Make Winter Canola Great Again? What We've Learned and Looking Ahead Brian Caldbeck, Rubisco Seeds <ul style="list-style-type: none"> • Where is Winter Canola successfully grown in north America? What makes those areas suitable? • What advantages does winter canola offer? • What challenges the production and marketing? • What genetic developments are coming in the next 5 years?
10:30 am	Break
10:45 am	OCGA Annual Meeting
11:15am	Canola Challenge 2018 Winners Panel <i>When the going gets tough — the tough get going.....</i> moderated by Meghan Moran, OMAFRA
11:45 am	Exhibitor Introductions
Noon	Lunch and Tradeshow
1:30 pm	How Canadian Trade Policy Bumps Your Bottom Line Alan Ker, University of Guelph
2:30 pm	InVigorRATE Thousand Seed Weight Packaging → Maximum Performance Dave Townsend, BASF

Pre-registration NOT required — \$20 cash at the door

Comments and Tips from the 2018

Jonathon Sammons
1st place winner
3761 lbs/ac



As the 1st place winner you obviously you have your canola cropping system finely tuned. What is the #1 tip you would like to share?

Answer: *"Most important is good crop rotation. This helps with weed and insect pressure by rotating not only the crop but the chemistry. Also creating a good seedbed. It goes against the no till trend but I find a small amount of tillage creates a uniform seedbed."*

How did your canola deal with the severe drought in 2018? Answer: *"Spreading each crop over different areas and soil types helps with weather issues. Yields were definitely off this year though."*

Why does canola have a solid spot in your rotations?

Answer: *"Canola is one of the best crops in my rotation and plays an important role. We always have trouble getting wheat in after beans. Because canola is harvested earlier, it allows establishment of a great winter wheat crop."*

James Hammerton
2nd place winner
3705 lbs/ac



It's great to have a winter canola Canola Challenge winner. Was the 2018 canola yield typical for your farm? Answer: *"2018 was an average yield year for our winter canola. Our best canola yield year was 2017 with a overall farm average of 3400 lbs/ac."*

What is your crop rotation with winter canola? Answer: *"I have grown winter canola for 3 years. I aim for winter canola into wheat stubble, followed with soybeans into canola stubble in the same season and then corn the following spring."*

What is your major challenge in growing winter canola? Answer: *"My biggest challenge with winter canola is managing residue for even seed emergence. My current thinking on how to deal with excess wheat residue is to either change the rotation to reduce residue or use aggressive tillage to bury the residue and discourage slug activity."*

"Another challenge is getting harvested seed down to an acceptable moisture level. And we do treat for cabbage seedpod weevil. Overwintering winter canola has not been a challenge for us."

"Overall I find if you pay attention — winter canola is a rewarding crop to manage and grow."

Earl and Anne Schneider
3rd place winner
3587 lbs/ac



As a multi year Canola Challenge winner – what can you share about your canola cropping system that achieves your great yields? Answer:

"We plant an average seeding rate of 4 lbs/ac, plant into good moisture conditions and make sure our ground is fit. Plus this year we used hen manure on our canola which helped as well."

Do you think the high temperatures at bloom reduced your canola yields this year? Answer: *"Considering the high temperatures and drought —it blew the doors off me how the newer varieties managed these conditions. Seed companies have done a great job in developing seed genetics to handle these conditions."*

Is canola a lucrative crop in your cash crop system? What are your plans for canola in 2019? Answer: *"We always grow about 500 acres. Canola is lucrative for us because it's a great way to get winter wheat in the ground as early as possible. And if you manage to your canola crop for optimal yield — it's all good."*

Ontario Canola Challenge Winners

Brian and Evan Besley
4th place winner
3401 lbs/ac



Your fields were amongst the first where Swede midge was first found. Did you see Swede midge evidence or damage this year? Answer: *"We usually manage Swede midge by monitoring traps and planting as early as possible, as we find earlier planted canola defends itself best. This year we watched our Swede midge traps very closely, as there was heavy pressure. After finding high populations in the traps we applied an extra pesticide treatment on all of our canola."*

Has canola resumed a place in your rotations? If so, why?

Answer: *"We love growing canola mainly because it allows us to plant winter wheat much earlier. Hate to admit it but that's really the only reason why it's still in our rotation at this point. Price/marketing has become extremely challenging when compared to oats and soybeans."*

How did your canola weather the drought and higher than optimal for canola bloom temperatures in 2018?

Answer: *"We farm some heavier silt-loam soil which tends to hold moisture pretty well. Generally the hotter the season the stronger the yields for us."*

Brian and Jon Wiley
5th place winner
3392 lbs/ac



As a consistent winner in the Canola Challenge, what is the #1 tip you'd recommend canola growers pay attention to?

Answer: *"Our highest canola yields come from our most fertile fields, these are the fields that are rotated regularly, matured regularly and fertilized heavily. My #1 overall tip is a strong canola crop always starts with early planting."*

Do you use a desiccant before harvest? Answer:

"We make a decision to desiccate after assessing the crop. Looking at whether it has matured evenly, weed pressure or sometimes the type of weeds. We probably desiccate two years out of three. This year we didn't desiccate any fields."

Why is canola a good fit within your farming operation?

Answer: *"Canola is an excellent fit for our operation. It has consistently been a high yielding crop and it spreads out the harvest work load. Plus early harvest allows for timely planting of winter wheat — setting the possibility for a higher yielding wheat crop."*

Don and Jeff Curry
6th place winners
3372 lbs/ac



You plant a significant amount of canola acreage and you have been a winner in the Canola Challenge many times. Why is canola a winner for you?

Answer: *"Our land base is quite spread out which gives us options for where to plant. For 2018 for instance with the dry hot weather, canola did not do as well close to home, whereas a little farther to the north, it did quite well. We find canola is a very good fit in our crop rotation and we believe the root system of the plant is beneficial for the soil. Another reason that canola is in our crop rotation is because our best winter wheat always follows the canola crop. Lastly it is a nice fit in our operation to spread out harvest in the fall."*

Clubroot has been found in your area. What are your plans to curb its damage and spread?

Answer: *"We do not currently have any clubroot in the land that we are growing on, however it is a concern and we continue to monitor the situation. We're taking measures to ensure that clubroot is not spread — by keeping our equipment clean when moving from farm to farm."*

Ontario Winter Canola Review

by Meghan Moran, Canola and Edible Beans Specialist, OMAFRA
Sydney Meloche, Weed Science Technician, AAFC, Harrow



Fig 1. Canola roots, Oct 15, 2018 approaching pencil size. Blenheim area field planted Sept 8th



Fig 2. The two images on the left show plant crowns well anchored in soil. The two images on right show plants with elongated hypocotyls and crowns 0.5-1" from the soil surface, which may reduce winter survival.

Winter canola fields across Essex, Chatham-Kent, Wellington, Hamilton-Wentworth, Haldimand and Niagara were assessed in fall of 2018. Approximately 900 acres were scouted in 20 fields. The goal is to take observations on plant populations and plant size in the fall, and assess winter survival in the spring. The observations will be used to assist producers with future planting decisions, and may support improvements to crop insurance programs for winter survival. Some guidelines on winter canola are provided below, followed by a summary of the assessments made this fall.

Guidelines on Seeding Rate and Population

The ideal canola plant population is 7-12 plants/ft² on narrow (7.5") rows, or about 9-15 plants per foot of row on 15" rows. Canola is quite 'flexible' and can branch out and compensate for low populations, so a field may still meet yield potential at stands as low as 5 plants/ft² (or 6 to 7 plants per foot on 15" rows).

Aiming for the higher end of these population ranges can provide a buffer against overwintering losses and other stresses in spring and summer. Producers should bear in mind that under average conditions only 40 to 60% of seeds typically emerge, although this primarily applies to where a seed drill is used for planting. The more precise depth placement and singulation achieved by a corn planter may result in higher rates of emergence than when a drill or grass seed box is used.

In a 2017 trial in Kenilworth, use of a corn planter resulted in faster rates of emergence and more consistent stands compared

to a drill, although average populations were similar in the end. The importance of seeding to the appropriate depth was made clear in a trial at the Elora Research Station in 2016. Emergence rates using a John Deere planter and RRV after-market canola plates were near 100% at a depth of 2.5 cm, but were only 52% at a depth of 4 cm and 80% at 0-1 cm.

Guidelines on Successful Overwintering

Survival of canola through winter and early spring is impacted by many factors including snow cover, length of winter, soil type, variety and plant growth stage. The growth stage prior to winter is impacted by planting date, weather, and fertility. In the fall, application of 30 to 40 lbs of actual nitrogen is recommended. Lack of nitrogen early on can significantly reduce the growth rate of seedlings.

Ideally, winter canola should have a root the length and diameter of a pencil for good winter survival (Fig 1). Canola survives on its root through the winter, unlike wheat which survives on the seed. Large roots are also important in anchoring the plant in the ground. Ontario farmers have reported that poor winter survival of winter canola in the 1990's was often because of heaving during early spring thaw-freeze events. Fields with heavy soils that are prone to heaving may show reduced survival.

The height of the crown above the soil surface may also impact winter survival. Research from other winter canola growing regions of the world has shown that where crowns are closer to the soil surface, winter survival may improve. Heavy crop residue, shading, and high density of canola plants or weeds may increase the crown height above the soil surface (Fig 2).

Summary of 2018 Winter Canola Field Assessments

Planting dates in the 20 fields ranged from Sept 7th to Sept 30th. The field with the most vigorous growth and largest roots was planted Sept 8th in Chatham-Kent on 15" rows using an air seeder. This field was at the 6 leaf stage when it was scouted in mid-October. Many of the fields were planted around September 19th and were at approximately the 4 leaf stage by mid-October. Ideally, plants should have 5-8 true leaves heading into winter, and roots with a ¼" to ½" diameter. Plants that are larger or smaller are at greater risk of winter kill, so populations in the scouted fields may be somewhat reduced by spring. Although we like to see uniform stands it is common to see a range of growth stages in a canola field, especially when seeding depth is less precise (e.g. a seed drill is used).

It is estimated that 12 of the 20 fields are at the optimal growth stage for winter survival and 12 (not necessarily the same fields) have strong populations. We are still learning about winter survival with modern hybrids across different regions in Ontario. Plants with less than 5 leaves have been observed to survive winter at Harrow in some years, but not always. However, plants that have 5-8 leaves but have elongated hypocotyls (crowns not sitting at soil surface) may not survive as well as hoped. Populations may become thinner by spring. This year, none of the fields were planted so early that they bolted (stem elongation with flower buds forming); bolted plants do not survive winter.

Rain in early September delayed planting in some areas, and excessive moisture reduced plant stands in a few fields. In areas with high amounts of crop residue plant stands were typically thin; this is likely a combination of poor seed depth placement, emergence issues, and slug feeding (Fig 1). On the other hand, fields with full tillage were often quite hard and crusted which can also negatively impact emergence.

In one field, an application of Eragon at 6 weeks prior to planting is likely the cause of an unacceptably thin stand. Winter canola cannot be planted in the same year as an application of Eragon. Other herbicide carry over restrictions can be found in OMAFRA's Guide to Weed Control. Downey mildew was confirmed in some fields (Fig 2). It is not a fungus so it cannot be controlled with fungicides, but the disease should not impact yield or winter survival at the levels observed.

Contact Us With Any Questions

Producers or crop advisors with questions are encouraged to contact Meghan Moran at any time. Meghan is interested in visiting fields and supporting producers and is working closely with Dr. Eric Page and Sydney Meloche at AAFC Harrow to develop more information for winter canola growers.

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Fig 1. Emergence is poor where residue is thick in this Hamilton-Wentworth field. It may be a seeding depth issue, inability of the seedling to come through residue, or slug damage – most likely all of the above.



Figure 2. Leaf samples from Wellington County with confirmed downy mildew disease,. Symptoms were also observed in Chatham-Kent.

Adapt and Adjust BEFORE You Find Clubroot

Ontario canola growers are urged to begin growing resistant varieties in 2019 to protect yield and slow the spread of clubroot.

During the 2018 season more fields were found with the disease. At this time there are approximately 20 canola fields known to be infected with clubroot, affecting at least 14 individual farmers/farm families. There are undoubtedly many more fields that have clubroot spores lingering in the soil that have not yet been detected through soil sampling or observing symptoms on canola plants. It can be stated with a high degree of confidence that every year clubroot will be found in more fields, affecting more farmers, and associated yield loss will become more common. The disease has already been confirmed in the following counties/districts: Bruce, Grey, Dufferin, Simcoe, West Nipissing, Temiskaming, Cochrane and Algoma (Fig 2). Other regions of Ontario where vegetables are grown have been known to have clubroot since the 1920's.

Clubroot symptoms are often worse when conditions are moist, because the spores swim towards roots in soil water. In 2017, conditions were fairly wet and there were many new reports of clubroot. Dry conditions in the summer of 2018 may have played a role in lower levels of infection and fewer new reports. Clubroot symptoms found in one Temiskaming District field in 2018 (first report on this field) were mild. Galls on the roots were small, and above-ground plant parts looked healthy (Fig 1). There was no yield loss on this field. At another location where the disease was found in 2018, infected plants had rotten roots and matured early, causing shatter losses. However, only a small portion of the field was infected so yield losses were limited.

It is recommended to begin using resistant varieties before clubroot is found on your farm, especially if the disease has been found in your region. Even careful, responsible farmers cannot entirely control the movement of clubroot onto their farm. You are at a greater risk of getting clubroot if farms in your region have clubroot, and if you hire custom services (in any crop) for planting, spraying, harvesting, tilling or even if you buy bales of straw/hay. Any way soil can move, clubroot can move too. Once you have clubroot it will not go away, but it can be managed.

When you do find clubroot in a field of canola, it has likely been there for a few years already. And if clubroot has had the opportunity to reproduce on susceptible canola for as few as two years, clubroot spore populations in the field can reach very high levels. In fact, billions and billions of spores are produced from just one infected plant. Once you have very high levels of spores in the field, even a clubroot resistant variety can show symptoms.

Planting a resistant variety on a field with very high spore counts puts a selection pressure on the clubroot population, resulting in expansion of pathotypes (strains) of clubroot that are not controlled by resistant varieties currently available. Producers in Alberta have learned that if you let spore counts reach high levels before starting to plant resistant varieties, the resistant varieties may only be useful for 2 seasons. The longevity of resistant varieties is reliant on spore populations in the field being as low as possible. If you plant a resistant variety before you have clubroot the chances of spore counts getting out of control in the first place are mitigated. Ask your seed dealer about available resistant varieties and give them a try on your farm in 2019.

Resistant varieties alone cannot prevent the spread of clubroot or the potential for yield loss. Canola producers that hope to keep the crop viable into the future by managing clubroot now should put the following best management practices in place:

- Plant clubroot resistant varieties.
- Crop rotations should only include canola once every 3 or 4 years.
- Control volunteer canola plants within 2 weeks of emergence, even when growing a resistant variety.
- Control Brassica weeds within 2 weeks of emergence, e.g. wild mustard, yellow rocket, shepherd's purse, stinkweed.
- Control who enters your farm fields as much as you can, ensure custom operators or scouts follow sanitation protocols.
- Reduce movement of soil from farm to farm - removing loose soil from equipment after exiting a field can significantly reduce the risk of moving spores.

Ontario farmers are adaptable and innovative.

These risk mitigation measures are relatively minor adjustments compared to the prospect of having a crop failure and potentially having to remove canola from the rotation.

Do not wait for clubroot to come to your farm before taking steps to manage the risk and reduce the spread of the disease.

Learn more at www.clubroot.ca and www.fieldcropnews.com

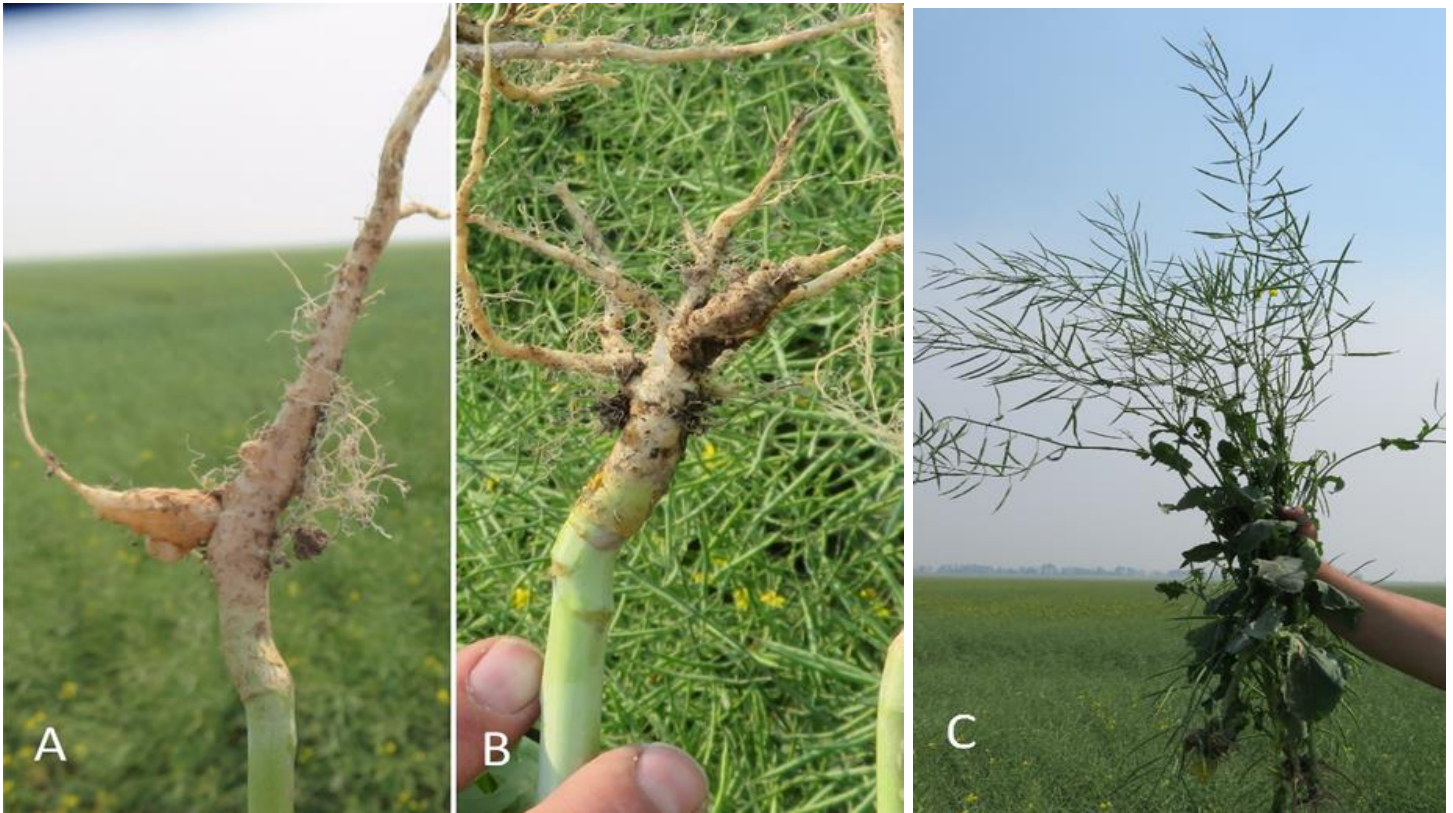


Fig 1. When the level of clubroot infection is low, minor symptoms in the form of small root galls are observed (A and B), and above ground plant parts look normal (C). This was the first detection of clubroot in this field, so there were probably low levels of clubroot spores. Dry conditions may have also limited the level of infection.

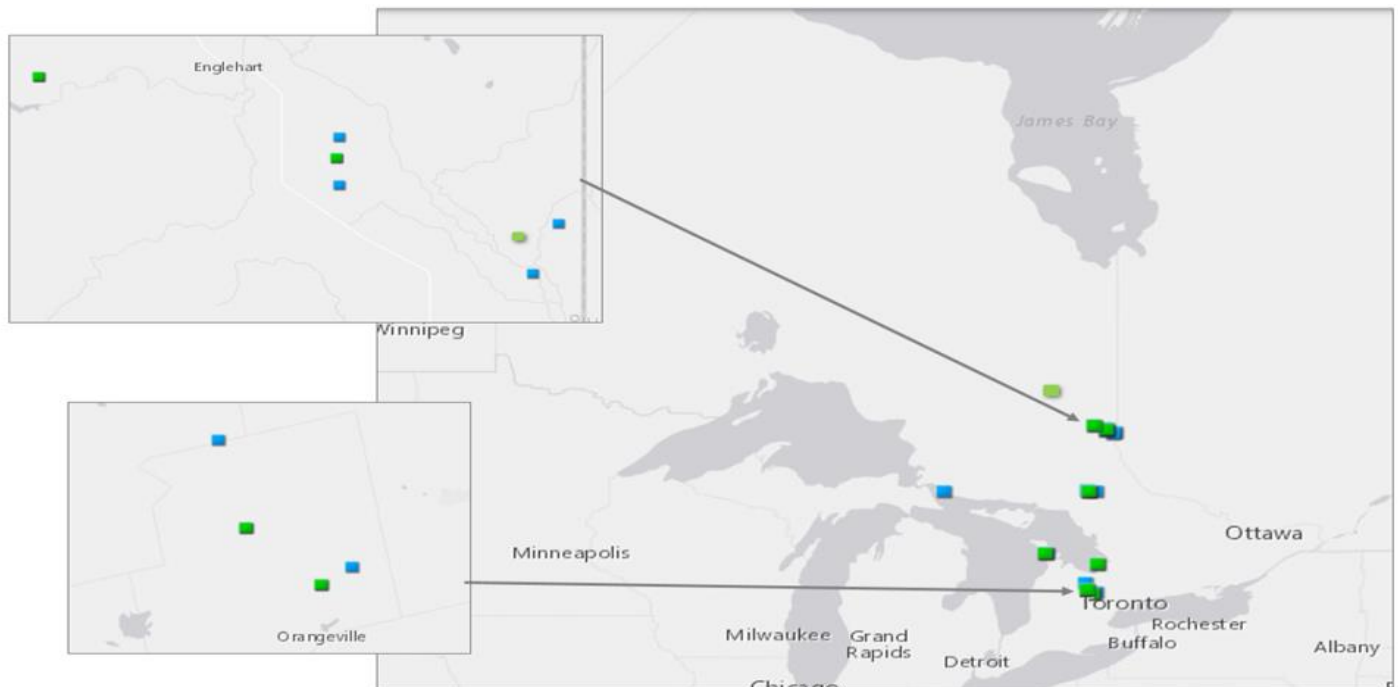


Fig 2. Distribution of known clubroot infected fields in Ontario (updated 2018).

2018 Seasonal Summary

Planting and Development

In 2018 there was an increase in spring canola acreage in Ontario compared to the previous two years. Insured acres totaled approximately 30,000 ac in 2016 and 2017, whereas there was nearly 40,000 ac in 2018. The most notable acreage increase was the jump from approximately 8,000 ac in Temiskaming in 2017 to nearly 13,000 ac in 2018. Rainy River and Thunder Bay also saw an increase in acres with 3064 ac grown across the two regions combined.

April was cold and rainy and there was an ice storm mid-month, leaving fields wet through the ideal timing for planting canola. In the last week of April, about eight inches of snow fell in Temiskaming with rain continuing into May. There were very few reports of canola being planted before May 5th in Ontario. The majority of canola was planted in the middle of May, although more rain fell during the Victoria Day long weekend.

June and July were relatively dry in many canola growing regions. Northern parts of Grey, Bruce and Huron counties had some of the driest conditions. Conditions were also quite hot. Temperatures above 28°C can cause flower and pod abortion (Fig 2), particularly if moisture is limited and nighttime temperatures are above 16 °C. Canola is vulnerable to heat stress from the green bud stage through to one week after flowers open. Significant yield loss was observed in some areas. Some fields bolted before there was row closure where moisture was very limited. Plants did not branch very much under hot, dry conditions, and bud clusters contained fewer buds than normal (Fig 2).

Insects and Diseases

Flea beetles were active in June, but pressure was generally low. Flea beetles were also observed at the end of the season. Thresholds are not established for late-season flea beetle, but damage is not likely to be an economic concern at fewer than 50 flea beetles per plants.

It is difficult to report on the level of swede midge pressure in 2018 because few fields had pheromone traps. Swede midge first emerged at the Elora research station on May 27th and similar emergence dates were reported from Temiskaming District and Dufferin County. Populations were low through the first two weeks of June so spraying early planted fields was limited. Later-planted fields were in the susceptible growth stages (one leaf through green bud) throughout June so insecticide applications were made up to the end of the month.

Significant losses to swede midge are certainly not a thing of the past. Yield loss was reported on a few fields in 2018, particularly in Temiskaming District. Swede midge damage causing reduced branching was frequently observed in fields through eastern and northern Ontario.

Diamondback moth larvae move into the province through weather events in some years, and were found in mid-July

in Temiskaming District and Grey County. In some fields an insecticide application was warranted. Diamondback moth larvae are green with a forked hind end, and may be found in a netting of silks on canola leaves (Fig 3). The larvae feed on leaves until the leaves are gone, then feed on pods which can lead to shattering.

Harvest and Yield

Fields that were planted early or were in very dry areas were ready to harvest by the first week of August in Bruce, Grey, Dufferin and Wellington Counties. Rain in early August resulted in the delayed harvest of some fields and caused re-flowering in many areas. Much of the canola was harvested in August and September; however, a few fields in Temiskaming District were not yet harvested in early November.

Where canola was under significant moisture stress during high temperatures, such as in parts of Huron, Bruce and Grey, some fields yielded as low as 500 lb/ac. These were unfortunate circumstances but many producers finished the canola season with strong yields. Later-planted fields and those with good moisture holding capacity were above average for many growers. In spite of the extreme conditions there was only one known instance of heated seed.

Average yields reported by Agricorp for West Nipissing, Dufferin and Wellington were approximately 2600 lb/ac, followed closely by Bruce, Huron, Oxford, Perth, Algoma, Cochrane and Sudbury at just under 2500 lb/ac. Yields in Thunder Bay and Rainy River averaged 2,380 lb/ac and in Temiskaming averaged 2,217 lb/ac. The combined regions of Simcoe, Halton, Durham, Peel and York had an average yield of 2,130 lb/ac. Grey County was low yielding on average this year, at approximately 1,690 lb/ac. Eastern Ontario was also low yielding on average; Ottawa, Renfrew, Prescott and Russell averaged approximately 1,710 lb/ac and the counties of Frontenac, Kawartha Lakes, Lennox, Addington, Northumberland and Prince Edward averaged approximately 1,210 lb/ac.

Winter Canola

Interest in winter canola is increasing with the recent interim registration of a variety named Mercedes, and research being conducted at AAFC in Harrow. Agricorp has reported that there are approximately 1750 acres planted in 2018 and enrolled in production insurance. Fields are being monitored in the counties of Essex, Chatham-Kent, Wellington, Hamilton-Wentworth, Haldimand, and Niagara to evaluate success of the crop and provide support to producers that are new to canola. Rain throughout September resulted in the cancellation of planting intentions on some fields, and poor emergence or late planting in others. Fields that were slow to grow because of a lack of fall fertilizer, or because of wet conditions and late planting, may not be advanced enough to survive the winter.



Fig 1. Hot, dry conditions cause abortion of flowers and buds, reducing the number of pods per plant.



Fig 2. Secondary bud cluster observed to have very limited number of buds because of moisture stress.



Fig 3. Diamond back moth larvae
(credit: www.canolawatch.org)

Audited Financial Statements

Ontario Canola Growers Association Audited by BDO Canada, Owen Sound, Ontario

Statement of Revenue and Expenses

REVENUE	Year ending June 30, 2018	Year ending June 30, 2017
License fees and research levy	136,901	118,821
Financial Protection Plan	7,205	6,254
Annual Meeting (Sponsorship & Registration)	4,727	6,880
Canola Challenge Sponsorship	3,000	3,000
Interest	2,174	1,612
Total Revenue	154,007	136,567
EXPENDITURES		
Amortization	333	311
Meetings - Annual, Committeemen, District, Agronomy and Stakeholder	11,191	11,848
Audit	5,250	5,250
Canola Challenge	5,800	5,826
Conferences	5,766	6,661
Crop Production Centre	5,769	5,808
Director Expenses - Accommodations & Meals	303	1,375
Meetings - Per Diems	10,891	11,899
Travel	4,739	5,087
Financial Protection Plan	7,205	6,254
Insurance	2,077	2,101
Market Development	1,032	736
Memberships	3,350	3,350
Newsletters	3,332	5,312
Office, Postage	2,045	1,564
Rent	1,200	1,200
Research	25,452	13,590
Salaries	36,400	36,400
Employee Benefits	2,750	2,659
Staff Travel	736	692
Telephone/Internet	1,879	2,811
Total Expenses	137,500	130,834
NET REVENUE	16,507	5,733

Balance Sheet

ASSETS	2018	2017
Cash & Short Term Investments	444,771	418,718
Accounts Receivable	7,599	1,843
Prepaid Expenses		
Capital Assets (Furniture & Computer Equipment)	1,193	766
Total Assets	453,563	421,337
LIABILITIES & NET ASSETS		
Accounts Payable and Accrued Liabilities	25,648	7,929
Deferred Revenue		2,000
Reserve Fund (Internally Restricted)	109,202	107,028
Research Fund (unrestricted)	317,520	303,604
Invested in Capital Assets	1,193	776
TOTAL LIABILITIES & NET ASSETS	453,563	421,337