

Ontario
Canola Growers
Association



Parasitoid Wasps Found on Ontario Canola Plants May Help With Control of Swede Midge

Dr. Rebecca Hallett's team at the University of Guelph collected 75-100 canola plants from multiple grower sites during the 2016 growing season.

Swede midge infested plants were brought to the lab and checked daily for emergence of swede midge and parasitic wasps. The research team was looking for the presence of swede midge parasitoids that may help farmers keep swede midge populations in check.

And they believe they may have found them!

Parasitic wasps were found in all fields, with parasitism rates ranging from 4% to 20%.

Specimens have been sent to Denmark for identification.

Dr. Hallett's team is now attempting to rear the parasitoids on swede midge larvae in the lab and, if successful, will conduct studies to learn more about its biological control potential against swede midge.

Parasitic wasps can be one of the most abundant natural enemies around. It is important to understand the species however; as broad spectrum insecticides will kill this beneficial as well as the targets.



Canola Challenge Winners

		Yield lbs/ acre	Variety	Location
1 st	Brian and Evan Besley Agronomist: Greg Hodgins Holmes Agro	3691	Invigor 5440	Shelburne
2 nd	Don and Jeff Curry Agronomist: Ralph Voisin Huron Bay Co-op	3556	Invigor 5440	Bruce Peninsula
3 rd	Murray Jantzi Agronomist Norm Coulter Verner Co-op	3475	Pioneer 54H33	Verner
4 th	Leo and John Blydorp Bryan Stover Woodrill	3456	L252	Grand Valley
5 th	Brian and Jon Wiley Agronomist: Wayne Foster Sprucedale Agromart	3422	Invigor L252	Meaford
6 th	Harold and Wilma Fisher Luke Curtis Cargill Harriston	3400	Invigor L252	Harriston

1st place – \$2,000 cash

2nd place – \$1,000 cash

3rd place – \$750 cash



Crop Tour Trial with singulated seeding rate of 2.5 lbs/acre yields 3124 lbs/acre

Equipment was the focus at the 2016 Canola Crop Production trials – in particular the Monosem canola planter and host Carl Brubacher’s new Curse Buster minimum tillage tool.

The trials included seeding rates varying from 1.75 to 3 lbs/ac using the Monosem singulating planter. Despite severe lack of moisture on the Bruce Peninsula, late planting and swede midge pressure the trials brought in great yields.

Seeding Rate	Yield	Variety
3 lbs/acre	2725 lbs/ac	Bayer L252
2 lbs/acre	2984 lbs/ac	Bayer L252
1.75 lbs/acre	3065 lbs/ac	Bayer L252
2.55 lbs/acre	3124 lbs/ac	Bayer L252
2.5 lbs/acre	3034 lbs/ac	Bayer 5440
2.5 lbs/acre	3315 lbs/ac	Bayer 5440 w/ CanGrow

The Monosem’s ability to singulate seed allows for much more precise placement of seed. And as Carl commented, “The more accurately you can place seed, the lower you can drop your seeding rate.” The Monosem also performed well in fields with heavy corn residue.

During harvest, Carl observed several advantages to the twin row planting and lower plant populations including:

- Easier harvesting because header divide can run in the 22 inch space between the 2 rows.
- Less stalk going through combine resulting in reduced dockage.
- Less trash left on the ground and no need for tillage before planting winter wheat.
- In spite of drought conditions the rows closed in well so no higher incidence of shatter loss.

Carl is impressed with how well the Monosem planter and Curse Buster work together. How the lower plant populations in twin rows allowed for more air flow, greater sun penetration and less disease. And the Curse Buster seemed to live up to its claim of increasing air and water exchange as well as reducing compaction with the soil prepared by the Curse Buster displaying good soil structure and a large and healthy root mass.

Could Peas Be One More Rotation Option For Your Farm?

by Ben Schapelhouman, TECC Agriculture Ltd.

A simple but proven key to strong, stable yields is an extended crop rotation – at least four years. Canola is generally one of the most profitable crops in Ontario's cool season production areas when not limited by insect or disease challenges. Soybeans continue to offer Northern or short heat unit Southern Ontario growers a profitable and viable crop rotation to canola, however they present challenges in cool or wet harvest years such as 2014. Adding field peas into the rotation offers profitable margins, frost tolerance, an early harvest, and allows the addition of early seeded winter wheat .

The 2016 crop year may soon prove to be an excellent soybean production year in Northern Ontario as a result of plenty of heat throughout the growing season and ample moisture during August. On the other side of the equation, average field pea yields at 1.3 mt/acre (48 bu) have been modest, if stable and encouraging, considering the very dry June and July combined with sustained high temperatures during the very heat sensitive flowering period. Even moderate heat during the flowering period causes flower abortion and lower pod counts. For this reason most growers aim to seed early to allow flowering prior to

Temiskaming also add 15 lbs per acre of sulphur to broadcast blends since research in Western Canada has indicated that a response is often obtained.

Historically one of the challenges with producing this crop has been lodging and the associated trials at harvest time, along with related quality issues such as earth tagging of the grain sample. Newer varieties have vastly improved in this regard over the last 5 to 10 years. Provided a fungicide is used to manage fungal diseases which can infect and weaken plant stems such as Ascochyta blight, lodging has



Clear Advantages – Advantages to the use of field peas to lengthen the canola rotation are numerous. Memories of a very wet October, 2014 and late spring frosts in 2015 highlight the advantage of implementing a crop rotation hedge strategy which includes a short season crop well adapted to leverage cool weather. Field peas can be seeded very early into cooler soils and are typically off the field in mid-to-late August. For areas where winter wheat hasn't been included on a broad scale because of difficulty seeding close to the optimal date, peas offer an obvious solution to both improved cereal yields and improved field equipment optimization.

Field peas are not totally new to the rotation in Northern Ontario, where smaller acreages have been grown for a number of years, however since canola's swede midge setbacks, alternative crops have been considered with a renewed focus. In 2015, pea acreages in Temiskaming – Cochrane were at several hundred acres and after encouraging results expanded in 2016 to a combined 3000 to 4000 acres of both green and yellow peas.

the hottest period of the summer. Typical yields under climatically normal conditions should range from 1.5 to 2.0 mt/acre (55-73 bu/acre).

Agronomic Advances – Local experience this year has clearly demonstrated that field peas respond positively to a strong fertility program, particularly phosphorus, and thrive in mellow soils where root growth is not restricted. Only about 25 to 30 lbs of phosphorus should be seed placed. Additional P can be addressed with a broadcast application or fields with high soil tests should be selected. Most growers in

not been an issue locally for either green (CDC Raezer) or yellow peas (CDC Saffron).

A great deal of Canadian pulses, including field peas are exported to India where demand has been strong in recent years. Western Canadian growers responded to very strong pea prices this past year by seeding and producing a large crop, which along with strong crops in other pulse producing regions such as Australia and India, has depressed cash harvest prices, so production is expected to fall in Western Canada next year.

Field Peas Opportunities and Challenges

Opportunities:

- Adds to the rotation – gives canola 1 in 4 year fit
- Typically solid margins in cool season growing areas
- Reliable, early seeding of winter wheat after peas – higher yields
- Early harvest – spreads use of same machinery over longer season
- Spreads weather risk – hedge against cool years when soys may not excel
- Spring frost tolerant – allows early seeding, first crop in the ground
- Tolerant of later seeding in cool season areas with moderate summer heat
- Marketing flexibility – green (specialty) vs yellow peas (commodity)
- No equipment modifications needed
- Improved varieties – lodging resistant

Challenges

- Not particularly drought or heat tolerant
- Not a good fit for high heat unit areas with early summer heat

What Do Ontario Agronomists Have To Say About

	Greg Holmes Holmes Agro	Deb Campbell Agronomy Advantage
How did the 2016 canola harvest turn out for your growers?	For the most part yields were quite respectable. 2500 lbs/acre was average with highs over 3500 lbs and lows of 1500 lbs. Soil types and moisture seem to be the determining factors. Lighter soils definitely struggled with the lack of rain and extreme temperatures during the flowering period.	The 2016 canola crop was average to slightly above average yielding for most of my producers. The season started early and was dry and hot through most of the growing season. In general producers were pleased with yields given the hot growing conditions.
What were the biggest challenges for your growers?	The biggest challenge this year, other than lack of rain, seemed to be cabbage seedpod weevil.	Challenges included a return to monitoring and spraying for cabbage seedpod weevil. As the canola crop began to bolt and flower CSW numbers were above threshold. Heat and moisture stress were apparent in many fields all season long. A strong fertility program helped support crop growth through the dry period. The late rains in August setup blackleg stem rot in several late maturing fields. High temperatures during harvest meant rapid drying conditions with some shatter losses and canola delivered well below 10% moisture.
How was the insect and disease pressure?	Flea beetles weren't a big issue as the crop went in in good shape and emerged evenly. Swede Midge pressure was generally low as well, as the crop seemed to progress through bolting quickly. Saw lots of plants with the top cluster effect as a result of swede midge but don't believe it deterred yield. Cabbage seed pod weevil was definitely more prevalent this year. Was tough to pin down the cause as numbers seemed to be quite variable from farm to farm.	Flea beetle pressure was not much of an issue. Many producers now use Lumiderm to minimize emergence issues that lead to higher risk of flea beetle feeding and plant loss. Swede Midge trap counts were lower than in previous years. Numbers did not spike until late June, leading to some management needed in late planted fields. Cabbage Seedpod Weevil returned in 2015 and then returned with even higher pressure and broader distribution in 2016. It seems producers will either have to spray for one pest or another.
How did Bayer's L252 and 5440 perform?	I had two plots this year with L252. One was almost identical to 5440 as the check, which was running just over 2600 lbs. The other plot was 500 lbs less than a combination of 5440 and L140P which a grower deliberately blended together.	I only saw L252 in plots. L252 performance has been consistent across several plots. Slightly higher yielding than 5440 and I like that it is a shorter stature.
Do you see any red flags for canola in 2017?	No red flags that I see. I think acres should be flat to perhaps up a bit next year in my geographic.	For 2017, canola producers should have a pest management plan to know when and where swede midge and cabbage seedpod weevil are a concern. And review crop rotations to move canola crops around and mitigate buildup of diseases like blackleg. Four years between crops is recommended. Crop budgets are tight currently for canola so plan for the best possible outcome.

The 2016 Canola Growing Season?

Luke Hartung North Wellington Co-op	Jennifer MacDonald Huron Bay Co-op	Jeff Kobe Sprucedale Agromart
<p>It was a tough year for growers in the North Wellington/Southern Grey area. Canola got off to a great start, but lack of rain and intense heat during flowering, took away from yield. Yields varied from 0.8-1.2T/ac, which is lower than what growers have become accustomed to in recent years.</p>	<p>As a whole, canola yield in the Meaford, Markdale, Dundalk Shelburne area was average to better than most thought it would be.</p>	<p>Average to below. With the dry growing season that covered most of my area the crop was just not able to handle the multiple stresses of dry weather and drought. On the plus side there were no quality issues. The crop stood very well through the harvest period with very little shatter loss.</p>
<p>Lack of rain and the heat... frustrating when there is nothing you can do.</p>	<p>The biggest challenge for growers in our area this year, like many other areas of the province, was the drought conditions. I was concerned about heat stress during flowering, and although we took precautions, the plant showed little signs of injury.</p>	<p>Emergence was a issue for some producers on the early planted canola as a week of tough weather in May made for some less than ideal stands on heavier soils and with the dry weather after that the plants were just not able to compensate as we have seen in the past. Insect pressure was heavy at times and the wide variance in canola planting dates brought on different pests at different crop stages. Keeping on top of things in the field was certainly challenging at times.</p>
<p>Flea beetle pressure was a non-factor in the spring. Swede midge populations varied, and some fields did need to be sprayed. But we have traps at all of our canola growers' fields, and we were able to stay on top of the swede midge, resulting in very little damage. There was a lot of talk about cabbage seedpod weevil, but we never saw the counts above threshold.</p>	<p>Flea beetle pressure was limited in the early season as growers took advantage of seed treatments. Late planted canola had heavy pressure at late pod set but it didn't play a significant yield loss. Some swede midge pressure but none of the traps we had in fields reached threshold, so generally not a concern this year in our grower fields. Cabbage seedpod weevil were easy to spot this year but very few sweep net samples had levels high enough to spray.</p>	<p>We dealt with all three of these pests in different areas at different times within the season. A number of fields were sprayed with insecticide for flea beetle control. Early planted canola was overtaken by heavy cabbage seed pod weevil forcing some growers to make an extra pass. Swede Midge damage again was evident this year. Decisions to treat for swede midge were made from populations counted in monitored traps.</p>
<p>L252 preformed well, despite the lack of rain. It seems to competing with and beating the old 5440 stand-by. That being said, I never weighed off a side by side comparison of 5440 vs L252.</p>	<p>Limited experience with L252. Only had a couple growers and all said it was comparable to 5440.</p>	<p>I did not have a lot of L252 in fields, but what there was, came out of the ground fast and was impressive for stand establishment. Yield was close to the same. I am just not yet convinced that L252 is going to be as consistent.</p>
<p>Biggest concern isn't agronomy related, but rather trade with China. If they pull out, it will be a huge blow to the Canadian canola industry. Hopefully the federal government takes this trade issue seriously and gets it resolved in a timely fashion.</p>	<p>The red flag I see for canola in 2017 is residue management. With low straw prices many farmers decided to spread the residue back on the fields. Planting into this will be a challenge.</p>	<p>We are dealing with some pests now that can completely wipe out a canola crop and the costs are rising every year. If market prices remain below breakeven levels, I think in some cases maintaining acres is going to be a struggle.</p>

Managing for 2017 Begins Right After Canola Harvest

by Meghan Moran, Canola & Edible Bean Specialist, OMAFRA

With another canola harvest wrapped up, farmers are focusing on fall activities and planning for the 2017 season. Now is a good time for a refresher on seasonable management practices you might want to consider on your farm.

Make records on what you observed this year, your field activities, crop inputs, and the results. It was a dry year compared to previous years, and there are likely some management practices you conducted (or opted not to) based on conditions and crop observations. Make notes on those decisions, the reasons you made them (e.g. weather records) and the impact on plant health, grain quality and yield. Reflect back on those decisions as well as the results and ask yourself, for example, how could you have improved weed control given the dry weather? Did you make the right decision regarding fungicide application?

Consider the need for fall weed control. If glyphosate resistant Canada fleabane or perennial weeds are present, a fall herbicide application may be the best option for controlling them. Managing sow-thistle and dandelion in the fall, for instance, can delay spring emergence and reduce their population. Mike Cowbrough, OMAFRA Weed Specialist, has compiled a list of the most effective herbicide products and rates in Table 1 below. His article *Fall Weed Management Tips* at www.fieldcropnews.com also offers tips on achieving good control under cool or frosty conditions.



Plant a cover crop if you are not planting winter wheat. Annual weeds are able to set seed with the available 4 to 6 weeks of warm weather following canola harvest. A cover crop such as oats or barley can suppress weed growth as well as provide erosion control and additional organic matter. Annual cover crops can be planted up to six weeks before a killing frost. More information on cover crops can be found at www.fieldcropnews.com or through the Midwest Cover Crop Council. Keep in mind that radish is an additional host for swede midge.

Continue to grow canola as a part of a diverse rotation. Yields have been strong in recent years in general, despite tough weather and pest conditions. Including canola in the rotation provides an opportunity to use different herbicide modes of action to manage resistant and hard to control

weeds. Canola also opens the door for early planting of winter wheat. Long and diverse rotations also provide a break in disease cycles between crops. There is evidence of clubroot and blackleg in Ontario, so it is suggested to grow canola 1 in 4 years to manage spore levels in the field.

Plan your rotations carefully. While corn can be grown after canola, there can be significant phosphorous deficiency issues in the corn crop. Mycorrhizal fungi are utilized by corn and other crops to take up phosphorous, but canola does not host the fungi. Flax, sunflower, peas and alfalfa can also struggle after canola in the rotation. Seed placed phosphorous may resolve the issue with phosphorous uptake, but it may be best to avoid such rotations.

There are also concerns with canola following soybean in the rotation as

Table 1. Best herbicide option for each targeted perennial plant based on research conducted by the University of Guelph, Plant Agriculture Dept.

Perennial Plant	Product(s)	Product Rate	Average Control (Range in control)
Dandelion	Glyphosate (540 g/L)	1.34 L/ac	90% (84 - 100%)
Perennial Sow-thistle	Glyphosate (540 g/L)	1 L/ac	90% (85 - 100%)
Canada thistle	Glyphosate (540 g/L)	1.34 L/ac	90% (85 - 100%)
Alfalfa	Glyphosate (540 g/L)+ 2,4-D Ester (564 g/L)	0.67 L/ac + 0.5 L/ac	95% (90 - 100%)
Wild carrot	Glyphosate (540 g/L)	1.34 L/ac	82% (49 - 100%)
Burdock	Glyphosate (540 g/L)	1.34 L/ac	90% (85 - 100%)
Red clover	Glyphosate (540 g/L)+ Distinct	0.67 L/ac + 200 g/ac	99% (96-100%)

Calling on All Canola Growers Get Involved in the Ontario Clubroot Survey

by Meghan Moran, Canola & Edible Bean Specialist, OMAFRA



During the 2016 season the first confirmation of clubroot in Ontario canola was found near Verner, in West Nipissing. Clubroot is a soil-borne disease that can persist in the soil for many years. Once established, clubroot causes canola roots to become swollen and deformed, restricting their ability to take up water and nutrients. Preventing introduction of clubroot to additional fields is of high importance. More information on clubroot can be found at www.clubroot.ca.

The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) are conducting a soil survey to determine the current distribution of clubroot in Ontario's canola growing

regions. Soil samples will be taken by farmers, agronomists and OMAFRA staff this autumn and tested at the University of Guelph Pest Diagnostic Clinic. There will be no cost to participants to mail soil samples or have samples analyzed.

We are requesting that farmers and agronomists in the areas of Temiskaming and Nipissing (total of up to 75 fields), and Bruce, Grey, Wellington and Dufferin (total of up to 25 fields) help in the survey by soil sampling fields that have a history of canola production. Soil sampling for clubroot can be conducted along with annual fall soil sampling. Up to 25 soil cores, approximately 8" in depth, should be taken from a 25 acre section and mixed thoroughly. Field entrances and poorly performing areas of the field should be targeted. A large ziplock bag of the mixed soil (double bagged) will be couriered to the Stratford OMAFRA office. A soil sampling protocol will be distributed to participants.

Understanding the current spread of clubroot in Ontario is critical to preventing its proliferation and initiating effective management practices. Farmers willing to provide samples or provide locations to be sampled can contact Meghan Moran, OMAFRA Canola and Edible Bean Specialist at meghan.moran@ontario.ca 519-546-1725. We thank you for your participation.



white mould sclerotia (dormant fungal bodies) can carry over in the field from soybean to canola. A cereal crop between the two would allow for breakdown of sclerotia in the field. Group 2 herbicides often applied in soybean can also be a challenge due to the long intervals required before canola can be planted. A list of herbicides and the interval required before planting canola can be found in Table 4-4 of the *Guide to Weed Control*.

Consider trying something new. With changes in available canola varieties, many will be looking for a new variety to try. This year try planting strips of different varieties on your own farms to decide for yourself which has the best fit for your farm. Look for lodging scores

comparable to your preferred variety so you have a better idea of what to expect at harvest. If you are looking at western Canadian data remember that higher amounts of rainfall in Ontario mean that varieties may grow taller here.

Try taking one step in a new direction. Do you conventionally till the farm? Consider moving some fields to a reduced or no-till practice. Much of the western Canadian canola production is no-tilled so there is a wealth of information available on no-till management. Have you collected a few years of yield data, elevation data off your guidance system, or have recent soil test data across one of your fields? Do you think you have enough field variability that it would be

appropriate to try a precision ag approach? Try working with an agronomist to address fertility or drainage issues, and review your historical yield and elevation data. Analysis can allow you to identify areas that never achieve your yield goal and those that currently do not but potentially could achieve the goal. Begin by researching the topic; resources can be found at <http://gfo.ca/Research/Understanding-Precision-Ag>.

By maintaining sound canola management practices and record keeping, and continuing to move forward with new goals, canola can remain profitable and draw the attention of more Ontario farmers.

