



Winning With Winter Canola

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Why winter canola?

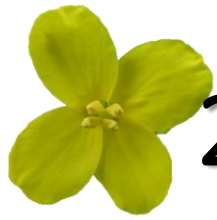
- Diversity to rotation
 - Another oilseed option
- Pests and weeds
 - Resistance management
 - Different time, different product
- Potential for double cropping
 - Harvested earlier than winter wheat





2018 Canola Yield Challenge Winners

		Yield lbs/ac	Variety	Location
1 st	Jonathan Sammons	3761	L252	Shelburne
2 nd	James Hammerton	3705	Mercedes Winter Canola	Woodstock
3 rd	Earl & Anne Schneider	3587	L252	West Luther
4 th	Brian & Ethan Besley	3401	L252	Shelburne
5 th	Brian & John Wiley	3392	L233P	Meaford
6 th	Don & Jeff Curry	3372	L233P	Owen Sound



2019 Canola Yield Challenge Winners

		Yield lbs/ac	Variety	Location
1 st	Nathan Van Overloop	4199	Popular Winter Canola	Chatham
2 nd	JR McLaughlin	3878	L255PC	Harriston
3 rd	Mike Christie	3683	L234PC	Tara
4 th	Emily & Sean Helmuth	3628	L233P	Harriston
5 th	Brian & Jon Wiley	3422	L255PC	Meaford
6 th	Harold & Wilma Fisher	3412	Mercedes Winter Canola	Harriston

1st Van Overloop, Chatham



Planted Sept 13, 2018

1st Van Overloop, Chatham

73% winter survival



1st Van Overloop, Chatham



Deer damage

1st Van Overloop, Chatham



6th Fisher, Harriston



Planted Sept 13, 2018



Downy mildew



6th Fisher, Harriston

54% winter survival

April 11, 2019



May 6, 2019



Monitoring Fields in 2018/19

~2000 acres planted in Essex, Kent, Hamilton-Wenworth, Wellington counties

18 fields monitored fall and spring

→ 7 “winter” kill

→ prolonged wet, cold conditions

Yield Range: 1900 – 3500 lbs/ac (0.86 – 1.59 tonnes)

Yield Average: 2722 lbs/ac (1.24 tonnes)

Winter (Spring) Survival

- Planting date
- Seeding rate/population
- Soil type, drainage
- Seed bed → fine, low residue
- Fall fertility

Field Selection and Prep: Herbicide Restrictions

Infinity] 10 month re-crop interval

Imazethapyr (Pursuit, Optill)
Metribuzin (Sencor)
Atrazine] 22+ month re-crop interval

Eragon]
2,4-D] Do not use pre-plant

Field Selection and Prep: Good Drainage

- If saturated, plants grow slowly or rot
- Heavier soils = more spring heaving



Field Selection and Prep: Low Residue

- Depth control
- Emergence
- High crowns/long hypocotyl
- Slugs



Tilled too fine before a hard rain

A bit too cloddy, not fine enough



Planting Date

Earlier than ideal winter wheat timing

Wheat → 450 GDDs before winter

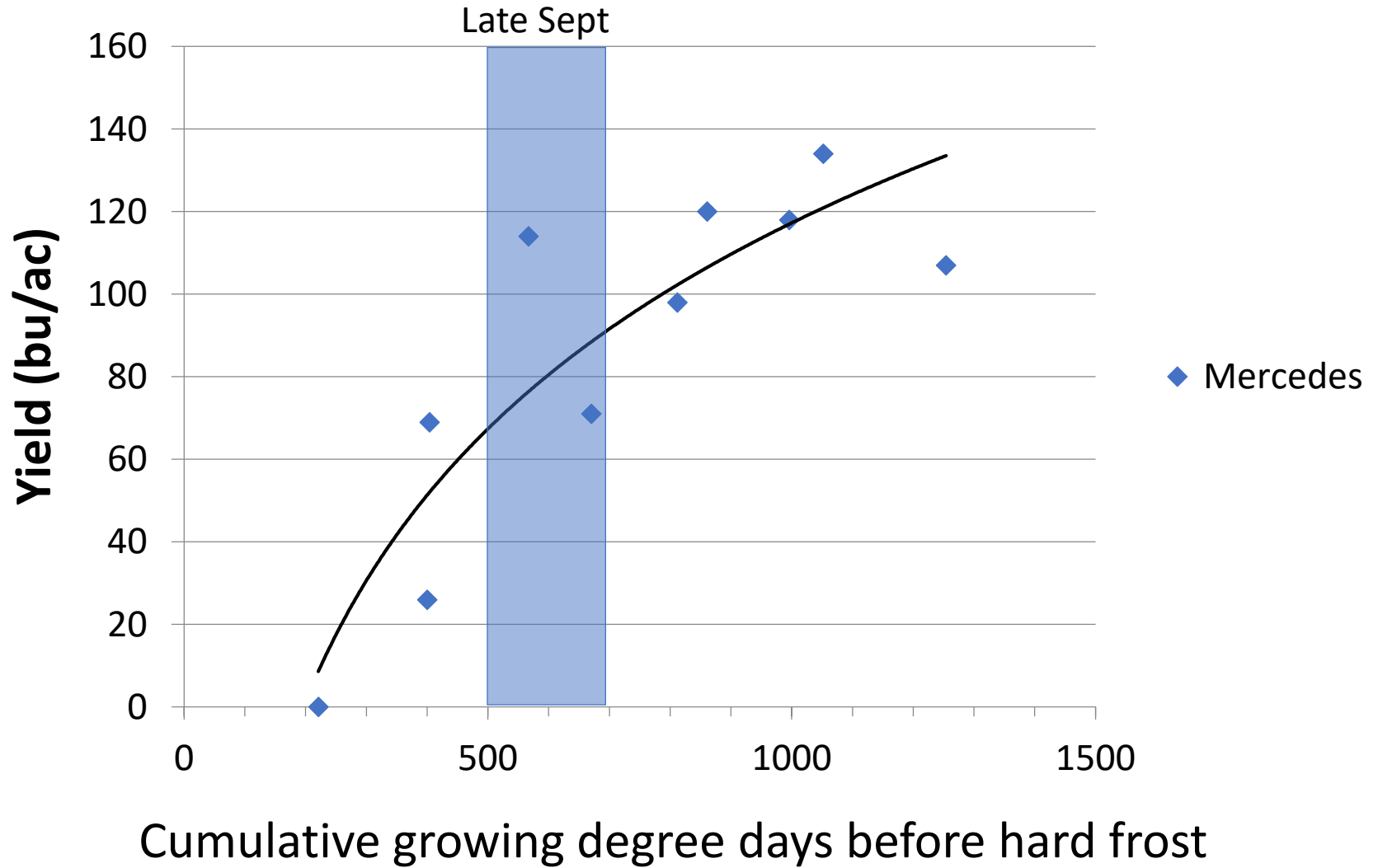
Canola → ~600 GDDs before winter

Not too early, do not want flower buds forming or bolting before winter.

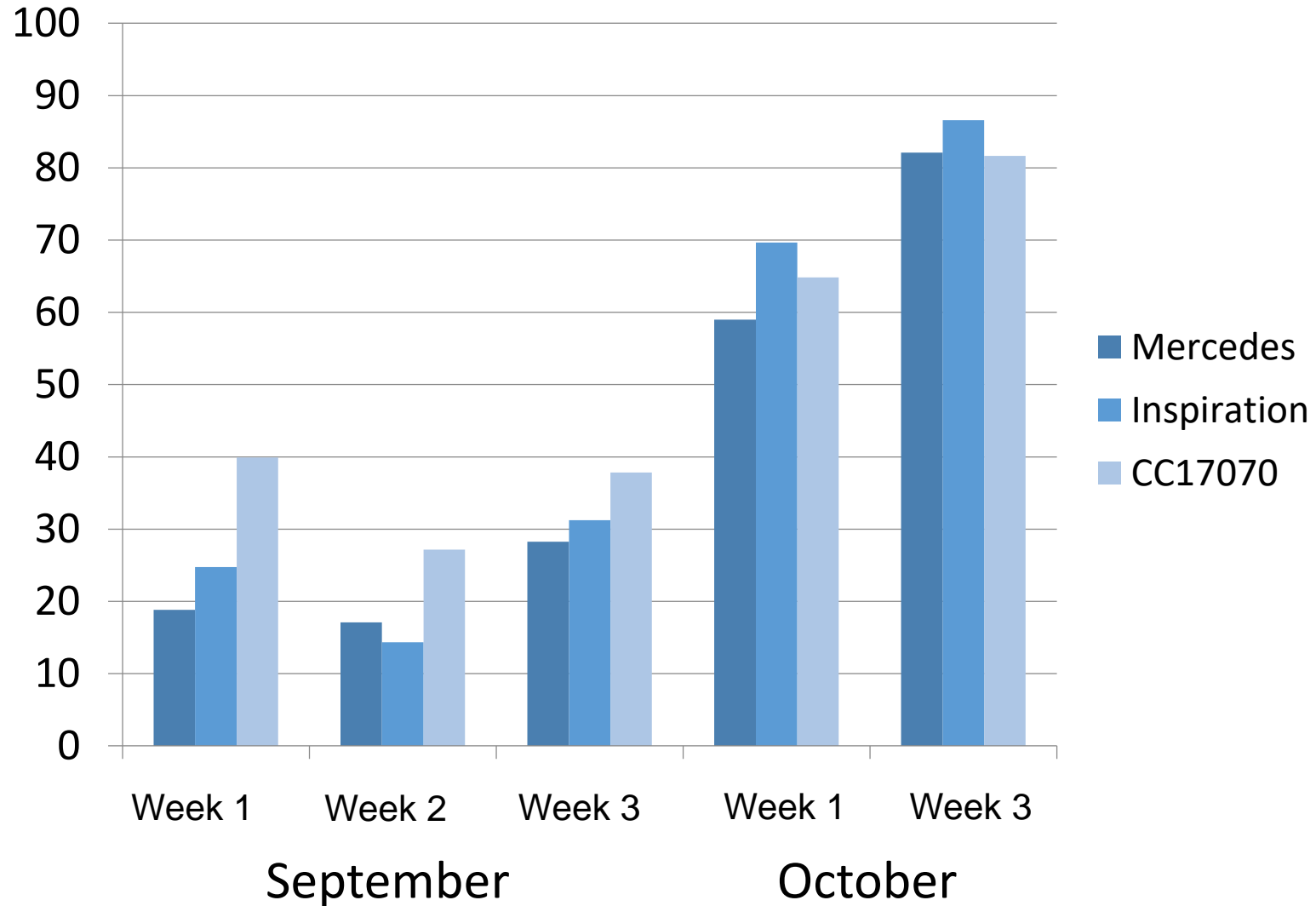
Essex and Kent Counties → Sept 5-15
likely ideal



Fall Establishment: Harrow ON

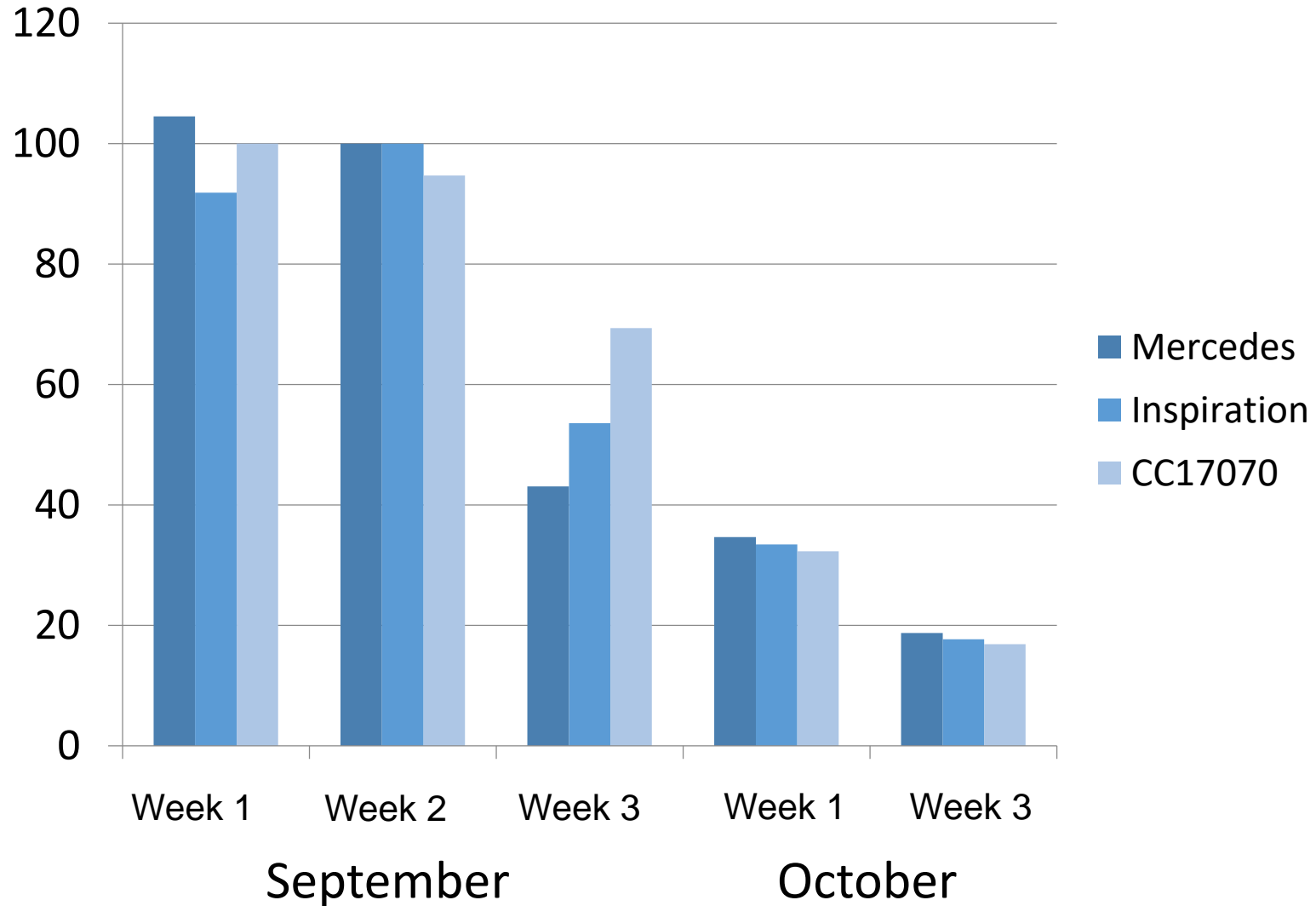


Winter Kill (%) – 2016-18 At Harrow and Woodslee



Relative Yield (%) – 2016-18

At Harrow and Woodslee



Seeding Rate: Depends on Planting Equipment/Row Spacing

Seed Drill

- 4 to 5 lbs seed/ac
- Typically 50-60% emergence
- Target 5-7 plants/ft²

Bulk up seed with elemental S, corn cob grits, MAP...

Planter

- 15 or 20" rows, twin rows on 30" centers
- 3 to 3.5 lbs seed/ac
- Higher rates of emergence (80%), but want space between plants on the row
- Target 250,000 seeds/ac

www.canolacalculator.ca/seeding-rate

T.S.W. 4.8 grams

4.8

Thousand Seed Weight (TSW) is measured in grams and can be found on every bag of certified seed.

Target Plant Density 6 plants/ft²


6

Not sure what to target? Check out our [plant density calculator](#) to see what target would best suit your fields. In a hurry? The CCC recommends targeting at least 5-8 plants/ft² to balance risk and profitability.

Estimated Emergence 55 %

55

Get this number by assessing and recording emergence data each year. If you don't have a farm-based number to use, start with 60% emergence and adjust when you have multiple years of on-farm data to support a change.

 Your Seeding Rate

5 lbs/ac

Seeding at 5 lbs/ac may not give you an optimum or economical plant stand because heavier seed lots have fewer individual seeds per pound than light seed lots. [Read More](#)

Your Total Seed Cost

Your Seed Cost per Pound \$ **12** /lb

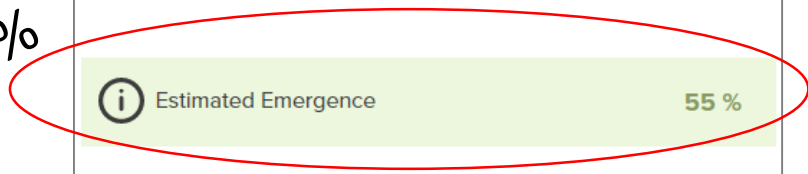
Cost of Seed Per Acre Using Above Seeding Rate and Seed Cost

\$ 60.00 /acre

[Save to My Fields](#)

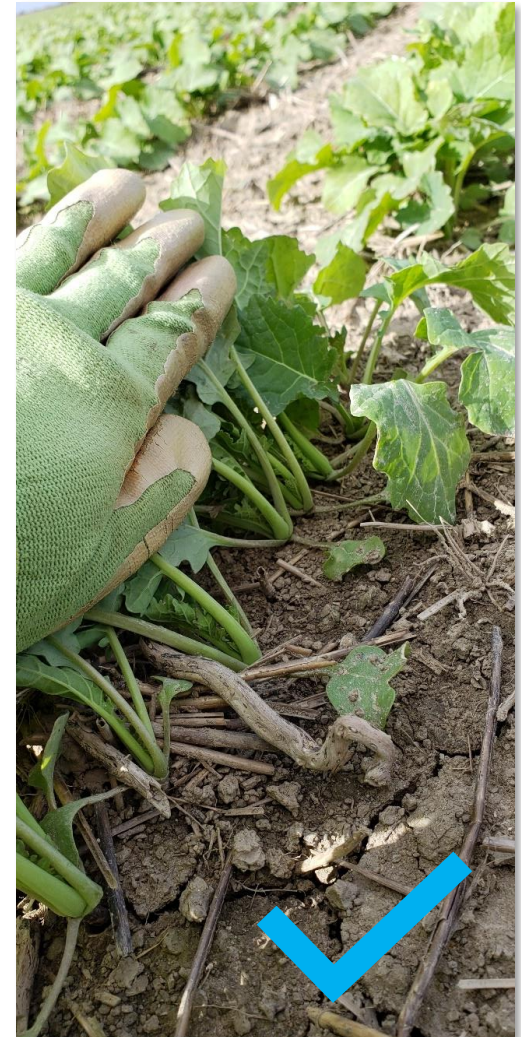
[Email](#) [Print/PDF](#)

Drill ~55%
Planter 80%



Seeding Rate: Give them Space to Survive

Canola seedlings compete with each other
High crowns/long hypocotyls are at risk



Checking Survival: Population and Health of Green Plants

- Cut plants at soil surface
- Squeeze stems below crown – are they super squishy?
- 3 to 5+ healthy plants/ft², evenly distributed

No yield potential



OK if some
like this



Good



Ontario Fertilizer Recommendations

Fall:

N 30-40 lbs/ac

S 20-25 lbs/ac

P 15-20 lbs/ac



Broadcast or band, not with seed



Ok with seed

Spring:

N 120 -150 lbs/ac

S 10 lbs additional S may be beneficial

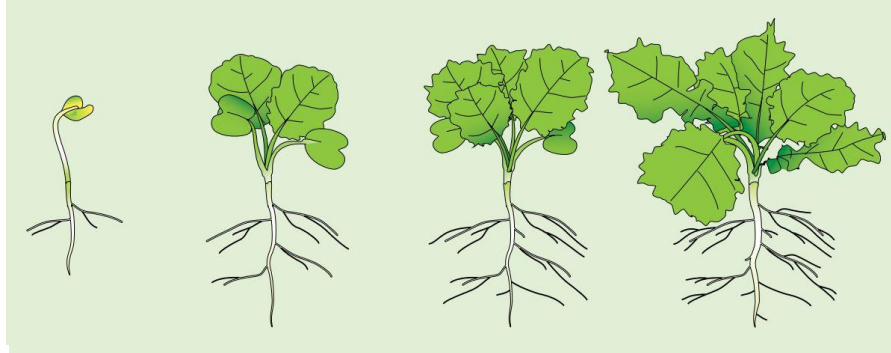


ASAP in spring

Any form of N

No in-crop benefit from elemental S

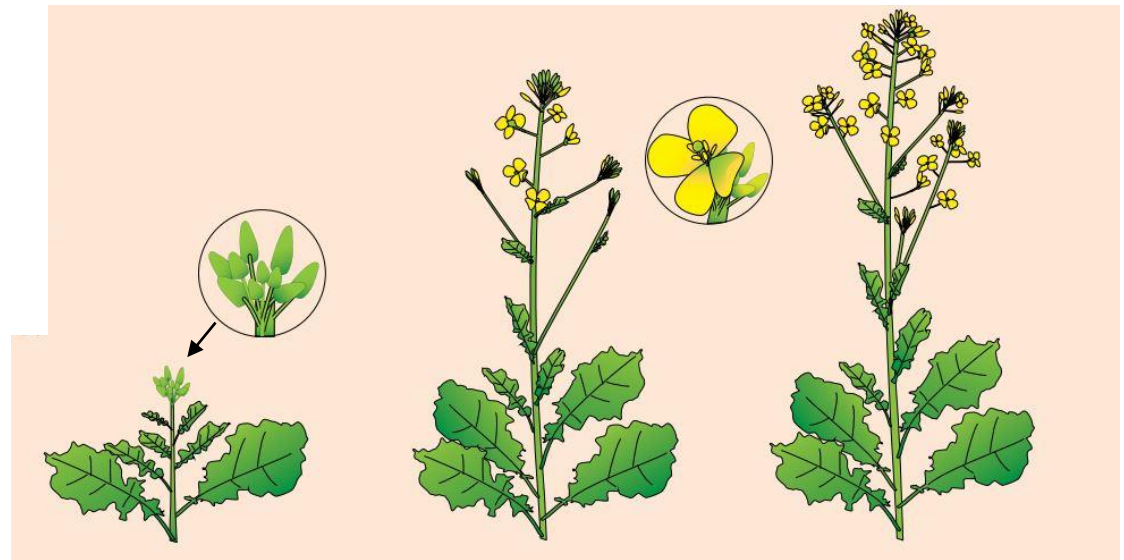
Fall Growth



~6 leaf

Spring Growth

Greatest fertilizer demand prior to bolting



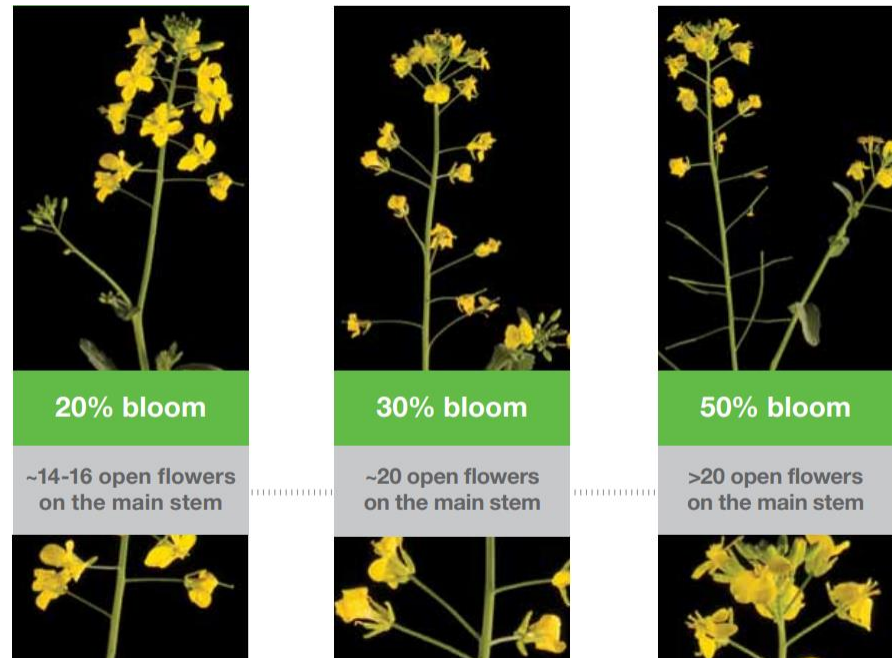
“Green Bud”

Bolting

Preventative White Mould Management

Proline, Cotegra
@ 20-50% bloom

Bayer Bloom Guide



Pests to Watch for:

Cabbage Seedpod Weevil



Clubroot



Aster yellows



Harvest

July 10-24, 2019 (Essex and Kent)

Dry naturally to 10% moisture

Or desiccate:

- Eragon + Glyphosate + Merge
- Reglone + Agral 90



OMAFRA Guide to Weed Control

FieldCropNews.com

canolacouncil.org/canola-encyclopedia

Harvest Timing

September planting



October planting



OPERATING EXPENSES (costs based on projected yield of 1.3 tonnes/acre)		Sample Costs/ Acre	
Seed	5.6 kg/ha — hybrid, treated	102.15	
Fertility	195 kg/ha N (373 kg/ha urea + 112 kg/ha ammonium sulphate) ¹	106.95	
	crop	80 kg/ha P ₂ O ₅ (24.5 kg/tonne removal rate)	38.70
	removal	39 kg/ha K ₂ O (12.0 kg/tonne removal rate)	12.70
Herbicide	volunteer cereal control	12.00	
Insecticide	if required (cabbage seedpod weevil)	24.85	
Fungicide	if required	20.75	
Tractor and machine expenses	fuel (13 L), lubricants	16.35	
	repairs and maintenance	14.65	
Marketing board and Grain Financial Protection fees (\$3.80/tonne)		4.95	
Production insurance		16.55	
Risk Management Program		8.30	
Custom work	fertilizer application, mixing and delivery	11.15	
	3 pesticide applications	33.50	
	other	—	
Trucking (\$9.25/tonne)		12.05	
Storage		—	
Land rent		—	
Operator labour (self or hired)		9.50	
Interest on operating		11.00	
Total Operating Expenses		456.10	

Cost Of Production

\$456/ac

Average Price in 2019

~\$455 /tonne

(Agricorp)

Historical prices

~\$500 /tonne

Avg 2019 Yield: 1.24 tonnes/ac (2720 lbs/ac)

$$1.24 \text{ t/ac} \times \$455 = \$564 \text{ /ac}$$

$$1.24 \text{ t/ac} \times \$500 = \$620 \text{ /ac}$$

Yield Winners:

$$1.50 \text{ t/ac} \times \$455 = \$682 \text{ /ac}$$

$$1.50 \text{ t/ac} \times \$500 = \$750 \text{ /ac}$$

Will spring come
earlier in 2020?

Plant soybeans
June 25-July 10
~30 bu/ac

Future Research Directions

- Managing residue for establishment
 - Till/Strip/No-till following WW or Soy
- Intercropping for reduced inputs
 - Winter Pea-ola
- Expanding northward?
 - Polish winter canola



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