

# Canola Research Hub

**Taryn Dickson,  
Canola Council of Canada**



# Discovery

- There are a lot of steps along the way to a discovery and each is important:
  - Many research projects that each contribute one new piece to the puzzle
    - Positive, negative or null results
    - New methods
    - New conditions or environments



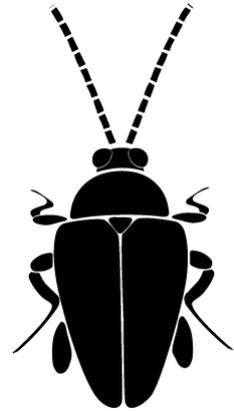
# Discovery

- Each research project provides value
  - One more step towards discovery
  - It is important to prevent duplication
    - Increased efficiency from a time, energy and funding perspective
  - Each step inspires a follow-up research project



# Discovery

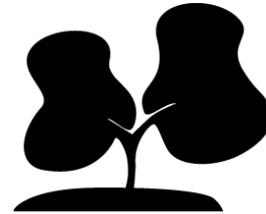
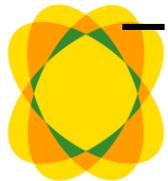
- So many topics covering a different piece of the understanding of sustainable, profitable canola production in western Canada:
  - Integrated Pest Management
    - Weeds
    - Plant diseases
    - Insects (pest and beneficial)



# Discovery

- Pieces of the understanding of sustainable, profitable canola production in western Canada :

- Fertility Management
- Harvest Management
- Plant Establishment
- Genetic

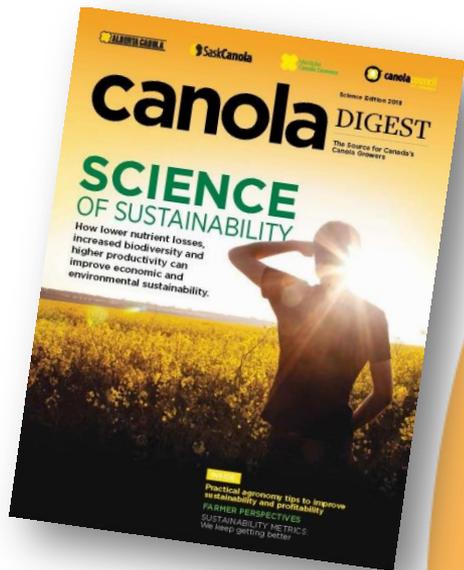


# Discovery

- In the labs, fields and sites at various facilities
- Carried out with various funding partners
  - Universities
  - Government facilities (AAFC, provincial)
  - Industry
    - Not for profit
    - Private companies

# Discovery

- Canola Council of Canada
  - Canola Agronomic Research Program
  - Canadian Agriculture Partnership



## NEW PROJECTS

Canola growers across the Prairies fund dozens of research projects with their levy payments to Saskatchewan Canola Development Commission, Alberta Canola Producers Commission and Manitoba Canola Growers Association. Many of those projects are funded through their joint Canola Agronomic Research Program (CARP). Other projects are funded through arrangements with other organizations listed in these summaries. The following is a list of all new projects announced or initiated in the past year.

## NEW GROWER-FUNDED RESEARCH PROJECTS



### PLANT ESTABLISHMENT

*Right: What is the ideal plant spacing within the row?  
Steven Shirliffe will study this question.*

**RYE COVER CROP TERMINATION DATE EFFECT FOR NO-TILL CANOLA EMERGENCE**  
**PRINCIPAL INVESTIGATOR:** Parviz Wasefi, (Risk-Data) and Pulisier Agriculture Management Society (PAMS)  
**FUNDING:** Alberta Canola

**HOW DOES IN-ROW SEED SPACING AND SPATIAL PATTERN AFFECT CANOLA YIELD?**

**PRINCIPAL INVESTIGATOR:** Steven Shirliffe, University of Saskatchewan  
**EFFECT OF CEREAL CROP RESIDUE DISTRIBUTION ON THE FOLLOWING YEAR'S CANOLA EMERGENCE AND YIELD**  
**PRINCIPAL INVESTIGATOR:** Nathan Gregg, Prairie Agricultural Machinery Institute (PAMI)  
**FUNDING:** SaskCanola and Sask Wheat



**AN ON-FARM APPROACH TO MONITOR AND EVALUATE THE INTERACTION OF MANAGEMENT AND ENVIRONMENT ON CANOLA ESTABLISHMENT AND DISEASE DEVELOPMENT**

**PRINCIPAL INVESTIGATOR:** Christiane Castellier, Indian Head Agricultural Research Foundation (IHARF)  
**FUNDING:** SaskCanola



## STRATEGIC PLAN PILLAR 3: INTEGRATED PEST MANAGEMENT

### Use biodiversity to your advantage

Biodiversity of habitat across the farm can increase populations of bees and beneficials, which can increase yields and provide a natural check on insect populations. Biodiversity through crop rotations can reduce disease severity and expand management options for weeds.

**T**he Canadian canola industry wants to increase production to keep pace with global demand, but the goal also stipulates that canola acres not exceed 22 million per year. At that average total, farms can maintain crop rotations necessary for long-term sustainability. The biodiversity that comes with crop rotation can be a valuable part of integrated management of insects, weeds and plant diseases.

In addition to crop rotation, here are a few other effective pest management tools farmers can use to improve profitability and achieve their sustainability goals.

**Scout before spraying.** Spraying has a cost and farmers want to make sure the pest they're spraying is actually causing enough crop damage to justify that cost.

90 per cent of Canadian producers always or usually use timely and regular field scouting to assess their crop and, determine economic threshold levels so they can apply pesticides only when and where they are needed. Find out more at [sustainablecrops.ca/metrics-platform](http://sustainablecrops.ca/metrics-platform).

**Follow insect thresholds.** Established science-based thresholds for many canola insect pests help farmers make better economic and environmental decisions, decreasing the use of prophylactic insecticide applications. The Canola Council of Canada's Canola Insect Scouting Guide, available for download at [canolacouncil.org](http://canolacouncil.org), provides a quick reference for insect thresholds. Hector Carcamo, research scientist with Agriculture and Agri-Food



*Diversity through crop rotation can keep blackleg low.*



## NEW PROJECTS

## PROJECTS FUNDED UNDER THE NEW CANOLA AGRISCIENCE CLUSTER



**T**he Canola AgriScience Cluster is a partnership between Agriculture and Agri-Food Canada and the canola industry under the Canadian Agricultural Partnership. Over a five-year period, this initiative will channel \$20 million in public/private funding into six areas of research aimed at sustainably growing the canola industry. By helping to reduce production risk, improve yields, enhance sustainability and increase market demand, the findings are expected to greatly expand the economic value of Canadian canola and its \$26.7 billion industry and propel it towards the 2025 strategic goals.

### THEME 1 AND THEME 2: ADVANCING END USES

Theme 1 projects will advance canola processing techniques and build on previous ground-breaking research

**ENHANCING YIELD AND BIOMASS POTENTIAL FROM VOLUNTEER CANOLA**  
**PRINCIPAL INVESTIGATORS:** Michael Ennes, University of Guelph; Ian Tetlow, University of Guelph

**WEEDING OUT SECONDARY DORMANCY POTENTIAL FROM VOLUNTEER CANOLA**  
**PRINCIPAL INVESTIGATORS:** Sally Vail, Agriculture and Agri-Food Canada (AAFC); Saskatoon; Rob Gulden, University of Manitoba; Isobel Parkin, AAFC Saskatoon; Steve Robinson, AAFC Saskatoon; Steve Shirliffe, University of Saskatchewan

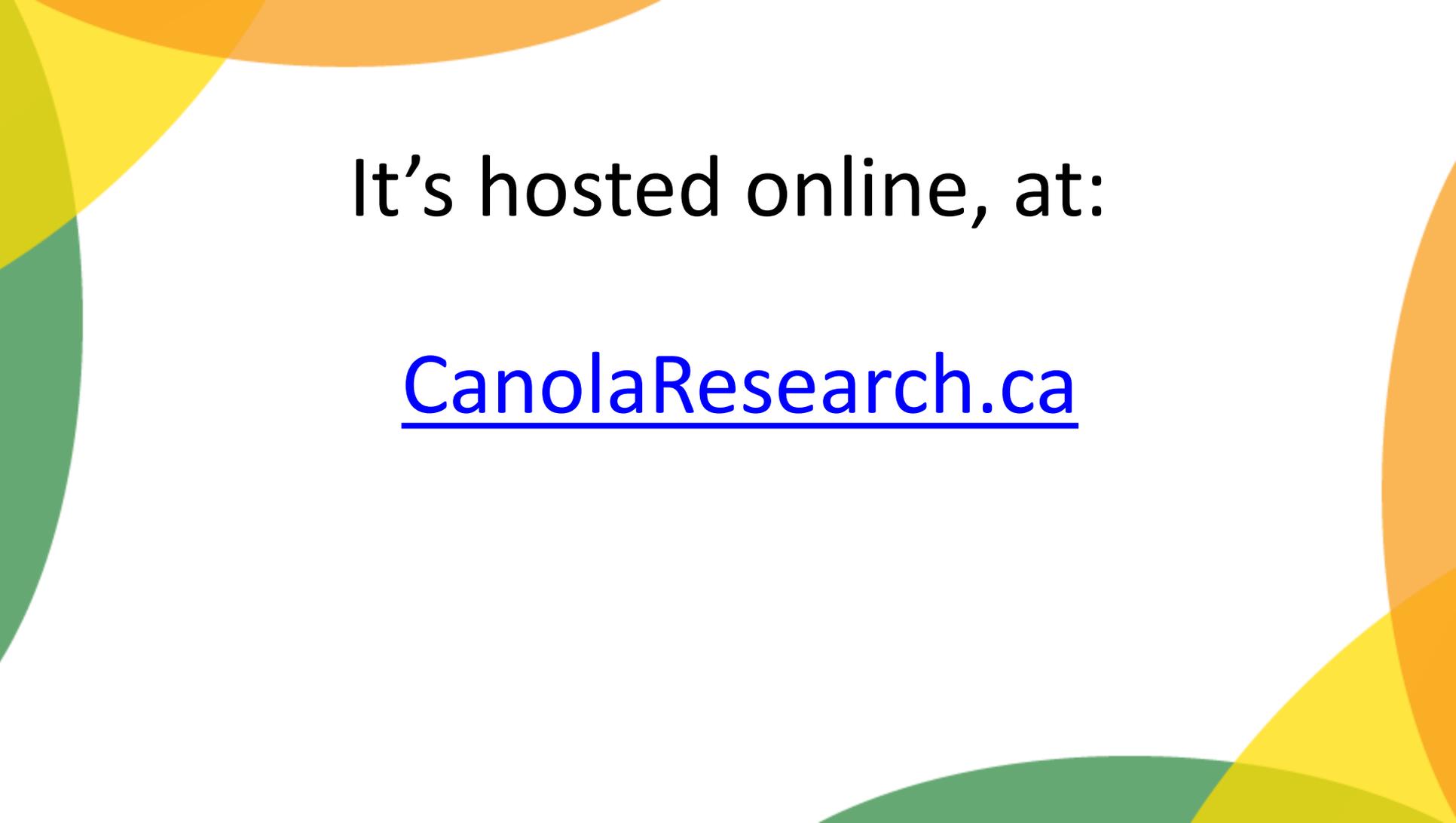
**ADVANCING THE FUNCTIONAL, NUTRITIONAL AND ECONOMIC VALUE OF CANOLA PROTEIN IN CANADA**

# Discovery

- These results need to be shared and extended to the growers, agronomists and researchers that can utilize them in order to make canola production more sustainable and profitable

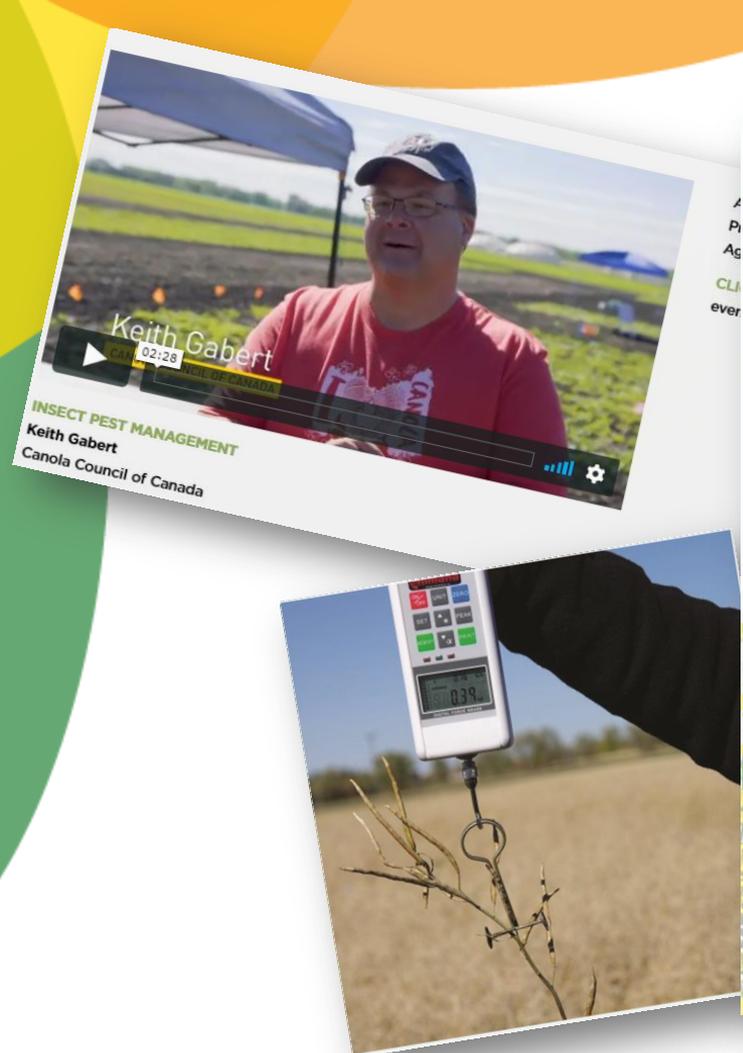
# Created a **hub** for canola research!

- Housed it all in **one location**
- **Allowed everyone to access it, at all times**
- Provided ability to dig into **varying degrees** of detail
  - Full report
  - Summary
  - Key findings



It's hosted online, at:

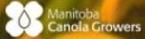
[CanolaResearch.ca](http://CanolaResearch.ca)



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CANOLA RESEARCH HUB

# RESEARCH SUMMARIES



Research > Canola Research Hub > Research Summaries

## FIND RESEARCH

Click [HERE](#) for an explanation of the filters below

Select from one or more filters below:



PLANT ESTABLISHMENT



FERTILITY MANAGEMENT



INTEGRATED PEST MANAGEMENT



HARVEST MANAGEMENT

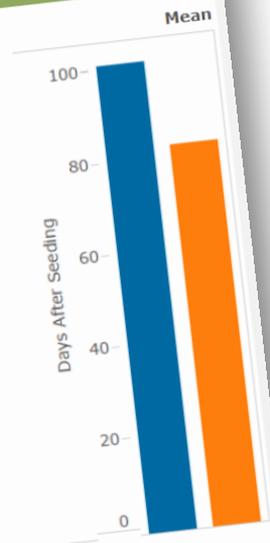
Keyword Search:

GO

[DATABASE QUERIES](#)

[ADVANCED SEARCH](#)

3.7.8 Elliott Table 1 and 2. Calendar dates (mean  $\pm$  SD), days after seeding and accumulated degree-days above different base temperatures for 10, 50 and 90% emergence of striped and crucifer flea beetles from early-seeded and late-seeded plots in 2004-2012



**Species**  
 Crucifer  
 Striped

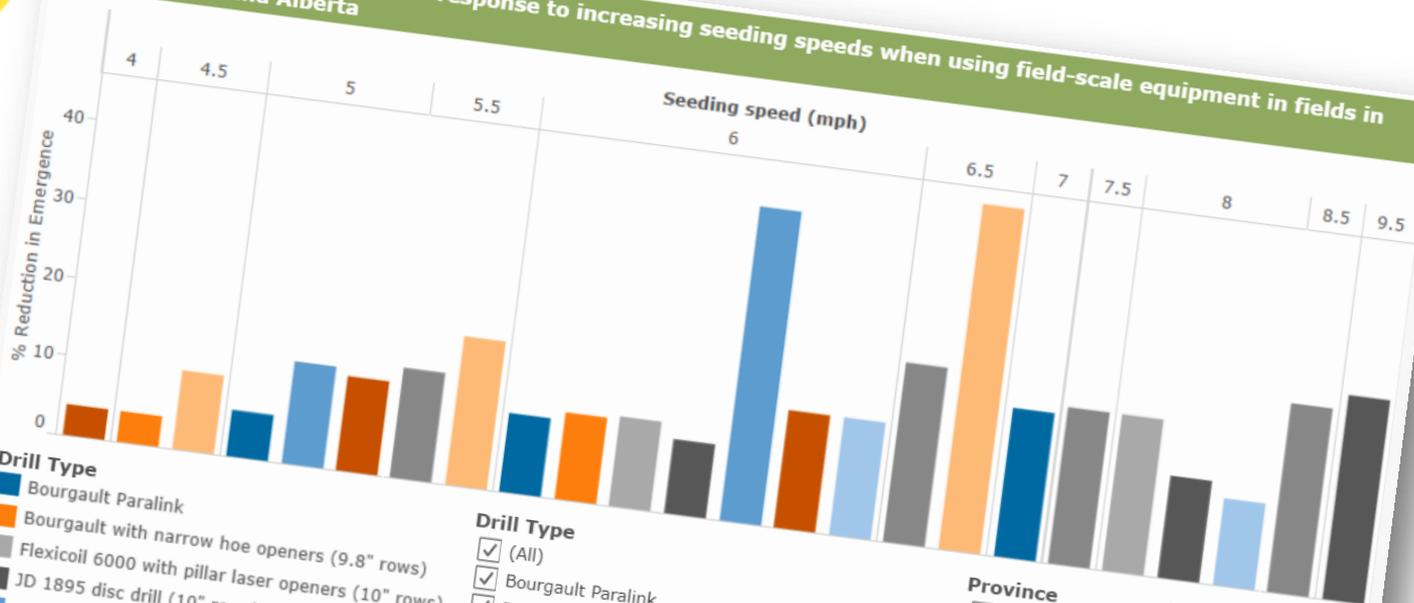
**Species**  
 (All)  
 Crucifer  
 Striped

**Variable**  
 Days After Seeding

**Timing**  
 (All)  
 Early Seeded  
 Late Seeded

Means for striped and crucifer flea beetles based on 4 and 9 years (n=60 cages/year), respectively. Degree-day accumulation (sine wave formula) started 18 days after seeding. \*Predicted degree-days to 90% emergence were not reached 2004 and 2005 so mean was based on seven years.

**3.1.1 Table 2. Canola emergence response to increasing seeding speeds when using field-scale equipment in fields in Saskatchewan and Alberta**



**Drill Type**

- Bourgault Paralink
- Bourgault with narrow hoe openers (9.8" rows)
- Flexicoil 6000 with pillar laser openers (10" rows)
- JD 1895 disc drill (10" rows)
- JD ConservaPak (10" rows)
- JD ConservaPak Paired Row
- John Deere Air Disc
- Morris 425 with paired row openers (10" rows)
- Morris Atom Jet

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**Province**

- (All)
- AB
- SK

**Year**

- (All)
- 2011
- 2012

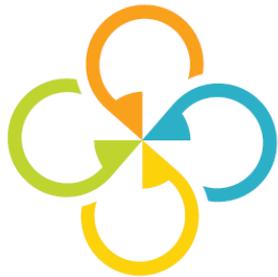
**Ground Speed**

(All)

The study was conducted at two farms in southern Alberta and two farms in central Alberta in each of 2011 and 2012. In Saskatchewan the field study was conducted at 16 farms in 2011 and 11

Now, we want to **improve** it:

[CanolaResearch.ca](https://CanolaResearch.ca)



**canola RESEARCH HUB**

Your Database for Canadian Canola Science



# canola RESEARCH HUB

Your Database for Canadian Canola Science

- Adding in more interesting research
- Incorporating user feedback
- Highlighting timely canola topics
- Better integrate research findings into canola production BMPs



# [CanolaResearch.ca](http://CanolaResearch.ca)



- Keep checking back for more improvements
- Stay tuned for a re-launch in 2020!



# Acknowledgements:



**Canada** 

The word "Canada" is written in a large, black, serif font. A small Canadian flag is positioned above the letter 'a'.

**Thanks for your attention!**

Questions?

# Canola Research Hub

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