



Challenges and Opportunities Facing Canola Growers

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Canola Council of Canada

Challenges – “On The Radar”

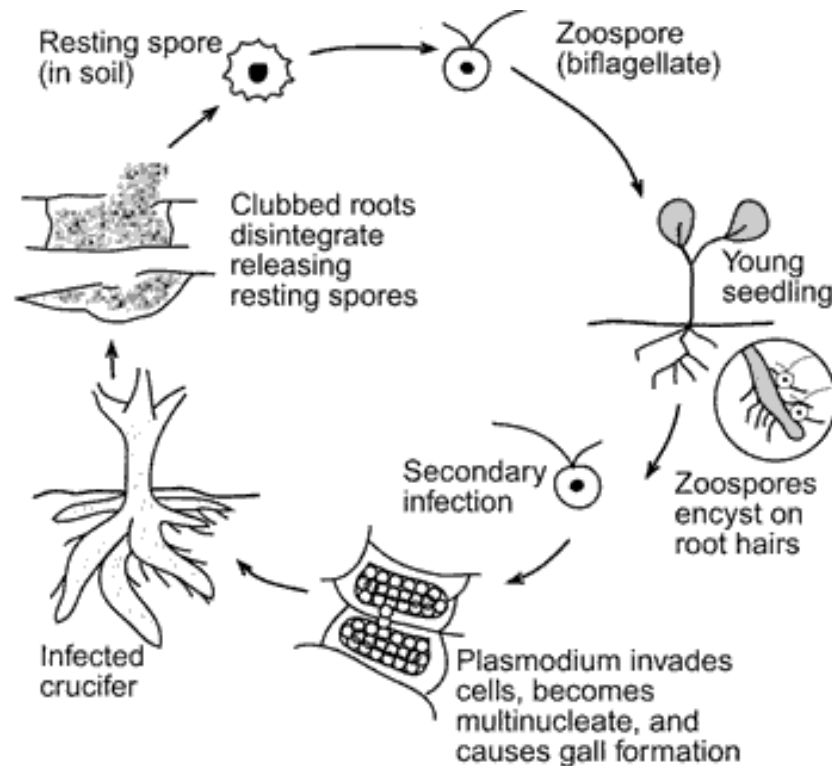
- **Clubroot**
- **Swede Midge**
- **Cabbage Seed Pod Weevil**

Clubroot



Clubroot Background

- Soil-borne disease of cruciferous crops
 - *Plasmodiophora brassicae*



Clubroot Background

- **Alberta**
 - Many counties
- **Saskatchewan**
 - Central
- **Manitoba**
 - More fields with positive results

Clubroot

- **2003**

- pH important
- Low risk of spread
- Fungicides may help
- CaCN may help
- Minor disease with moderate severity potential

- **2013**

- Very highly aggressive
- Soil movement is profound
- European controls ineffective
- Multiple sources of resistance available
- Eradication may be possible?

Management – What Does NOT Work

1. Fungicides
2. Seed treatments
3. Boron
4. Liming soil
5. Most soil amendments
6. Bait crops
7. Tillage
8. Crop Rotation

Management – What DOES Work

1. Crop Rotation
2. Resistance
 - > Rotate it!!!
3. Early seeding
4. Equipment sanitation
5. Early identification
6. Zero tillage
7. Quarantine/isolation
8. Eradication???
9. Brassica weed control
10. Clean inputs
11. Planning:
 - not just canola problem
 - asses risk
 - develop a management plan

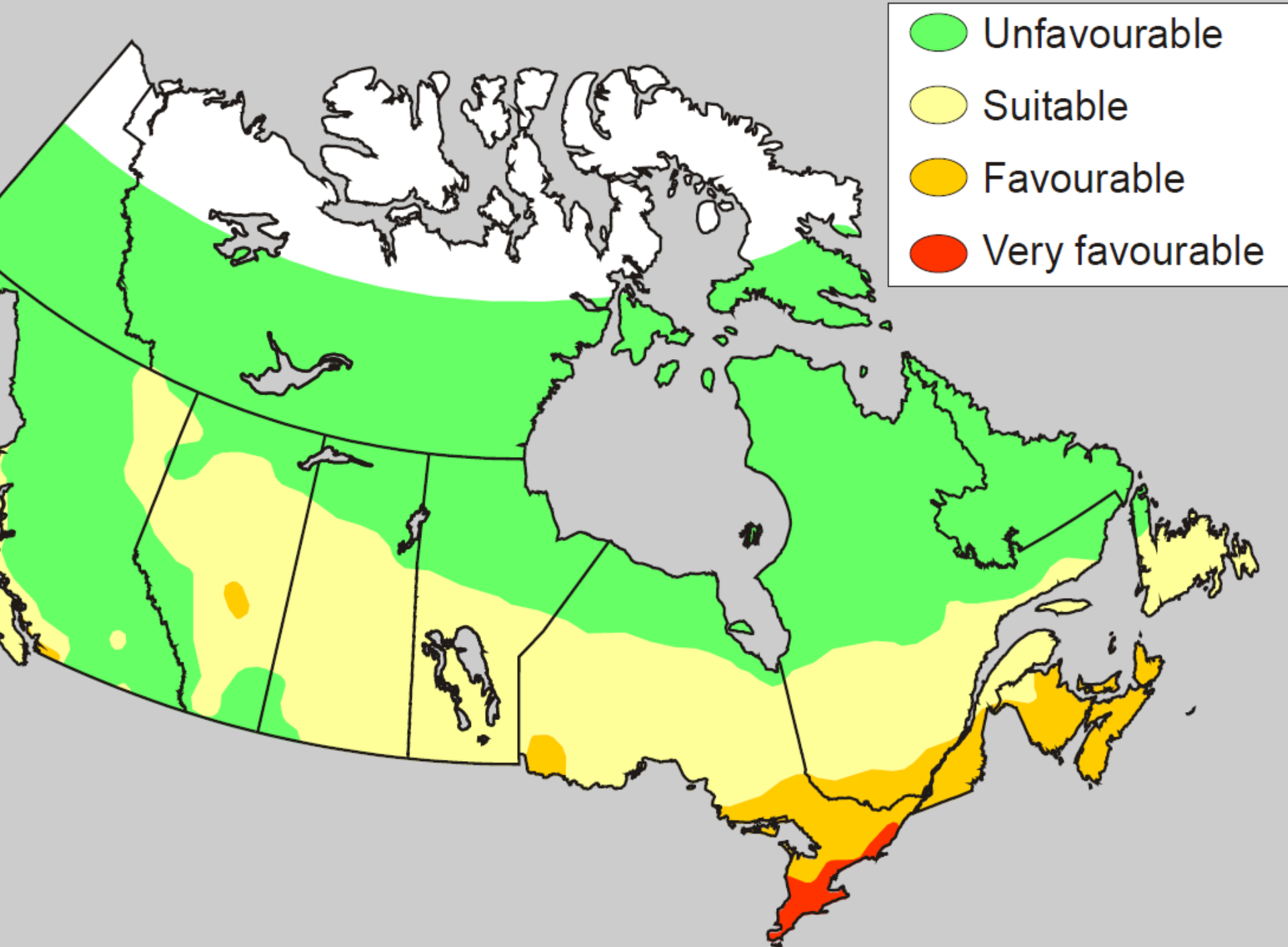
Take Home Message:

- **Limit soil transfer – Prevention!**
- **Scout for symptoms**
- **Use resistance where appropriate**
- **For more information:**
 - clubroot.ca

Swede Midge

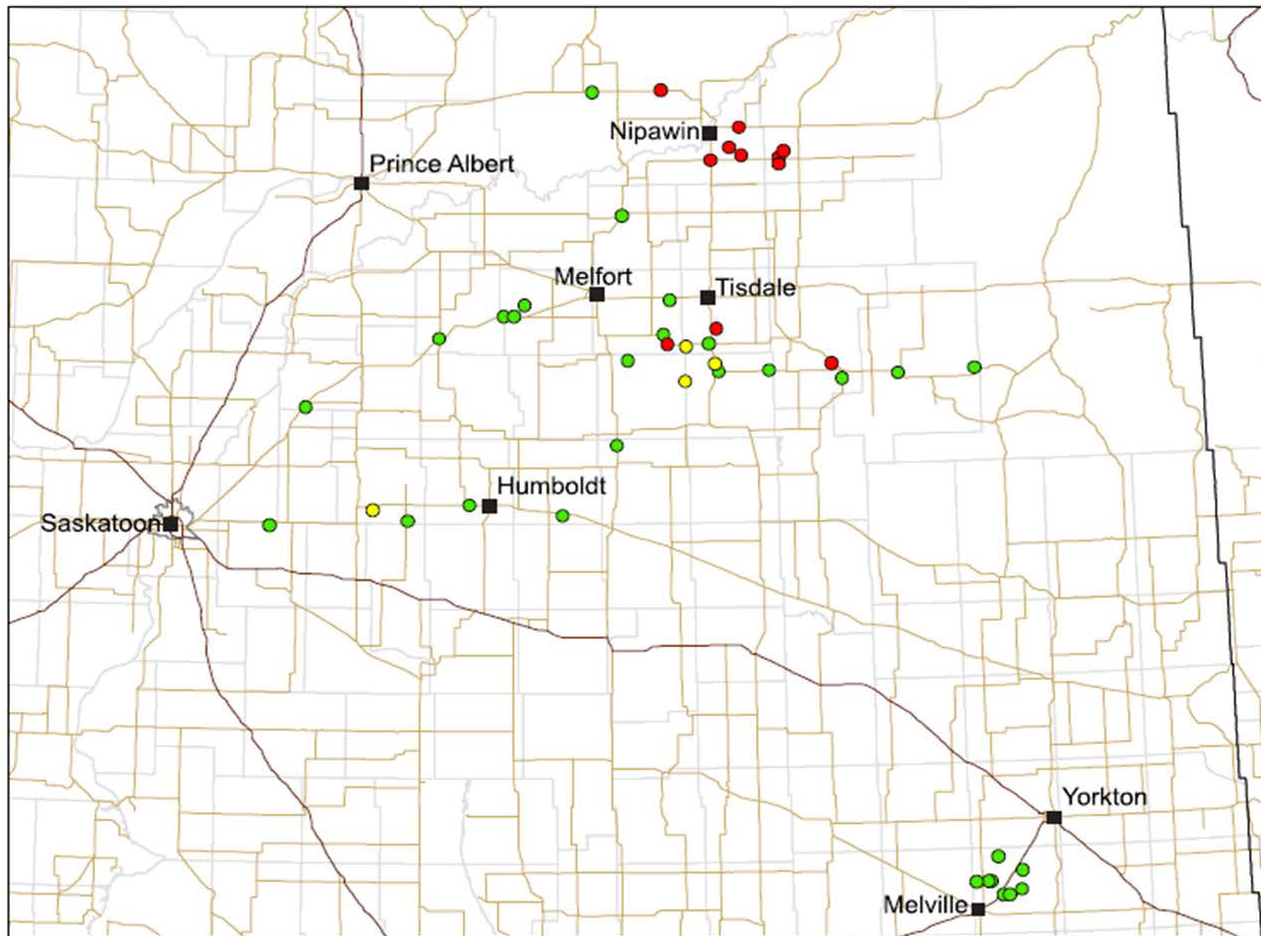


Susan Ellis



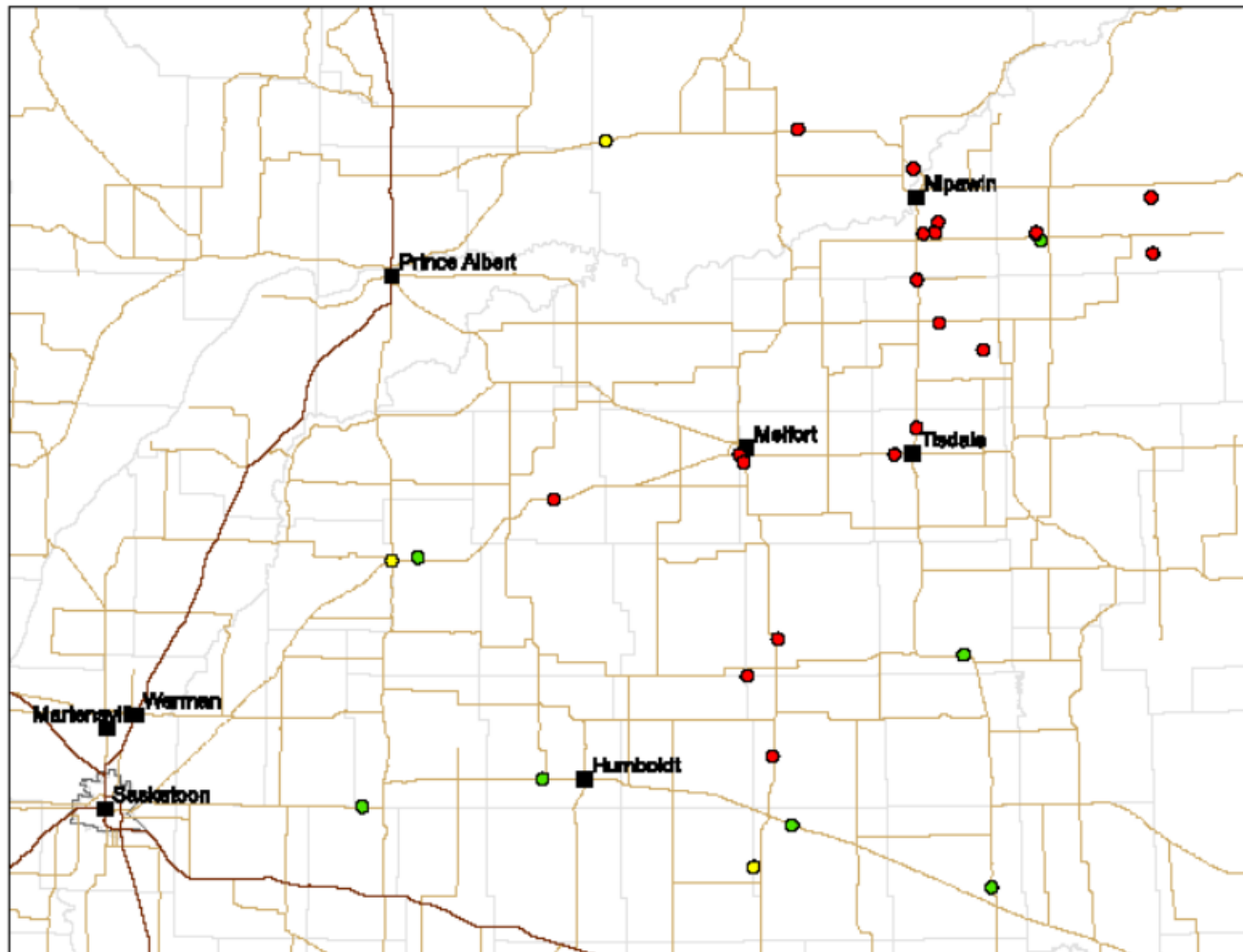
2012 Swede Midge Survey

Larvae Present: ● Absent: ●
Symptoms: ●



2013 Swede Midge Survey

Larvae Present: ● Absent: ●
Symptoms: ●



Swede Midge Appearance

Adult - tiny delicate fly similar in colour to a small mosquito



Swede Midge Larva



Lyle Cowell

Damage Symptoms

- **Swollen, distorted or twisted young shoots**
- **Premature bolting**
- **Swollen and closed buds; bottle-shaped flowers**
- **Multiple branching**
- **Blind head, witches' broom (death of apical meristem)**

Symptoms

Carrot River, SK July 11, 2013



Owen Olfert



Symptoms



AAFC

Damage on Canola / Dégats sur le Canola



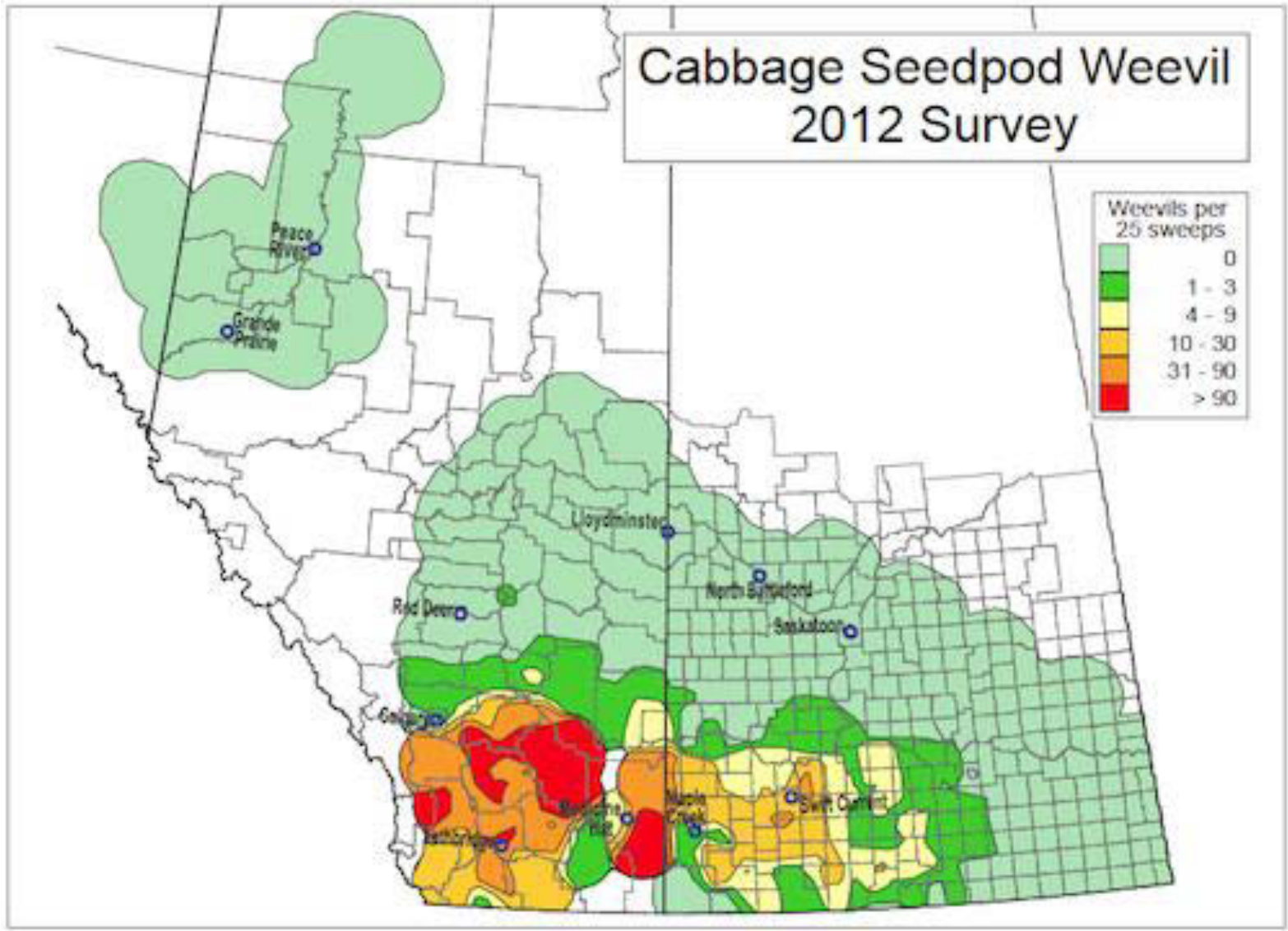
Take Home Message:

- **Keep scouting!**
- **Remain aware of insect forecasts and media information on current pest outbreaks**
 - Canola Watch
- **No economical control options at this time**

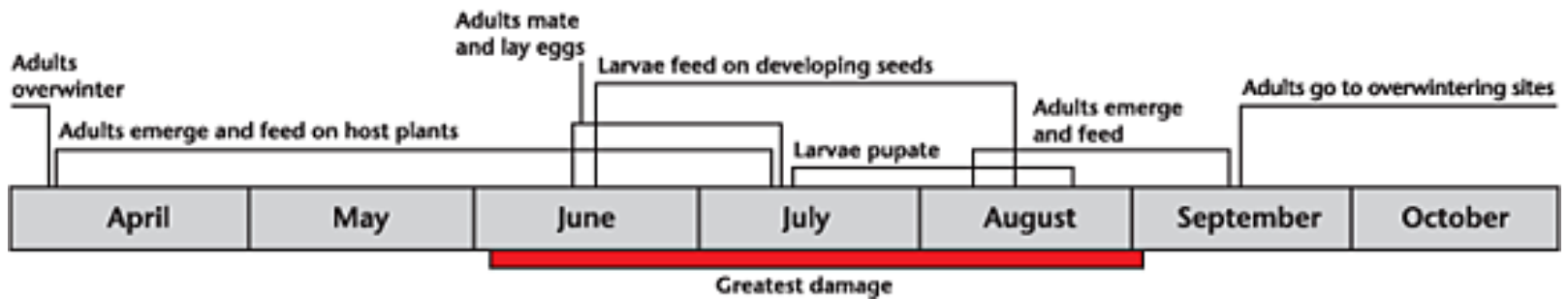
Cabbage Seed Pod Weevil



Cabbage Seedpod Weevil 2012 Survey



Cabbage Seed Pod Weevil Lifecycle



Cabbage Seed Pod Weevil

- **Economic Threshold of 20-30/10 sweeps remains a nominal or estimated threshold based on known damage potential. Year 2 of a 4 year study now completed with Dr. Hector Carcamo.**
- **This same thresholds may result in one or more exit holes in 25% of the pods at harvest**
- **CSPW remains a growing threat in Western Canada**

Take Home Message:

- **Keep scouting!**
 - Sweep net
- **Don't Spray too soon**
 - Will continue to invade
 - Beneficial predators

Opportunities




- **Canola Performance Trials**
- **Resource material**
- **What is a “good rotation”**
- **Keep it Coming**
 - **Canola Industry targets for 2025**

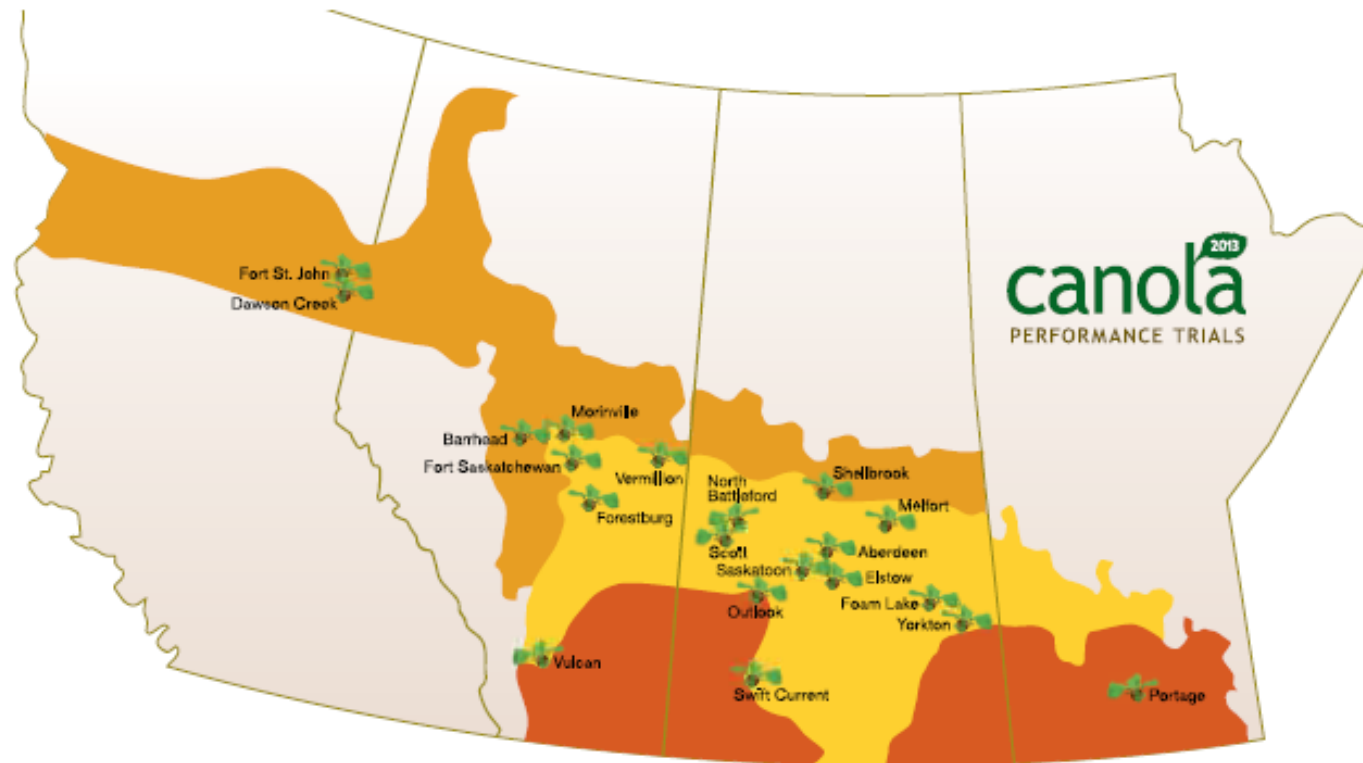
Canola Performance Trials

- **The next generation in variety evaluation for Western Canadian canola growers**
- **Relevant and unbiased performance data**
 - Reflects actual production practices
- **Comparative data on leading varieties**
- **<http://www.canolaperformancetrials.ca>**

Small Plot

Small Plot Locations throughout Western Canada

-  Long Season
-  Mid Season
-  Short Season



*A total of 108 field scale trials were approved this year:
AB=43, SK=50, MB=15*

canola²⁰¹³
PERFORMANCE TRIALS



Field Scale (Large Plot)

- **Weigh Wagons**
- **Varieties must be in Small plot program to be entered in the Field Scale**
- **Sites are declared at the beginning of the season**
- **Common check variety used on all sites**

CPT – What to Look For???

- Yield
- **BUT.....Look first at other important agronomics of a variety then narrow down by performance data**
 - Match herbicide system with weed spectrum/rotation
 - Disease package
 - Maturity

CPT – What to Look For???

- **Use multiple site and year data when comparing varieties**
- **Look at sites that had different growing conditions than your area this year and in previous years**
- **Look for the best overall fit for your farm!**

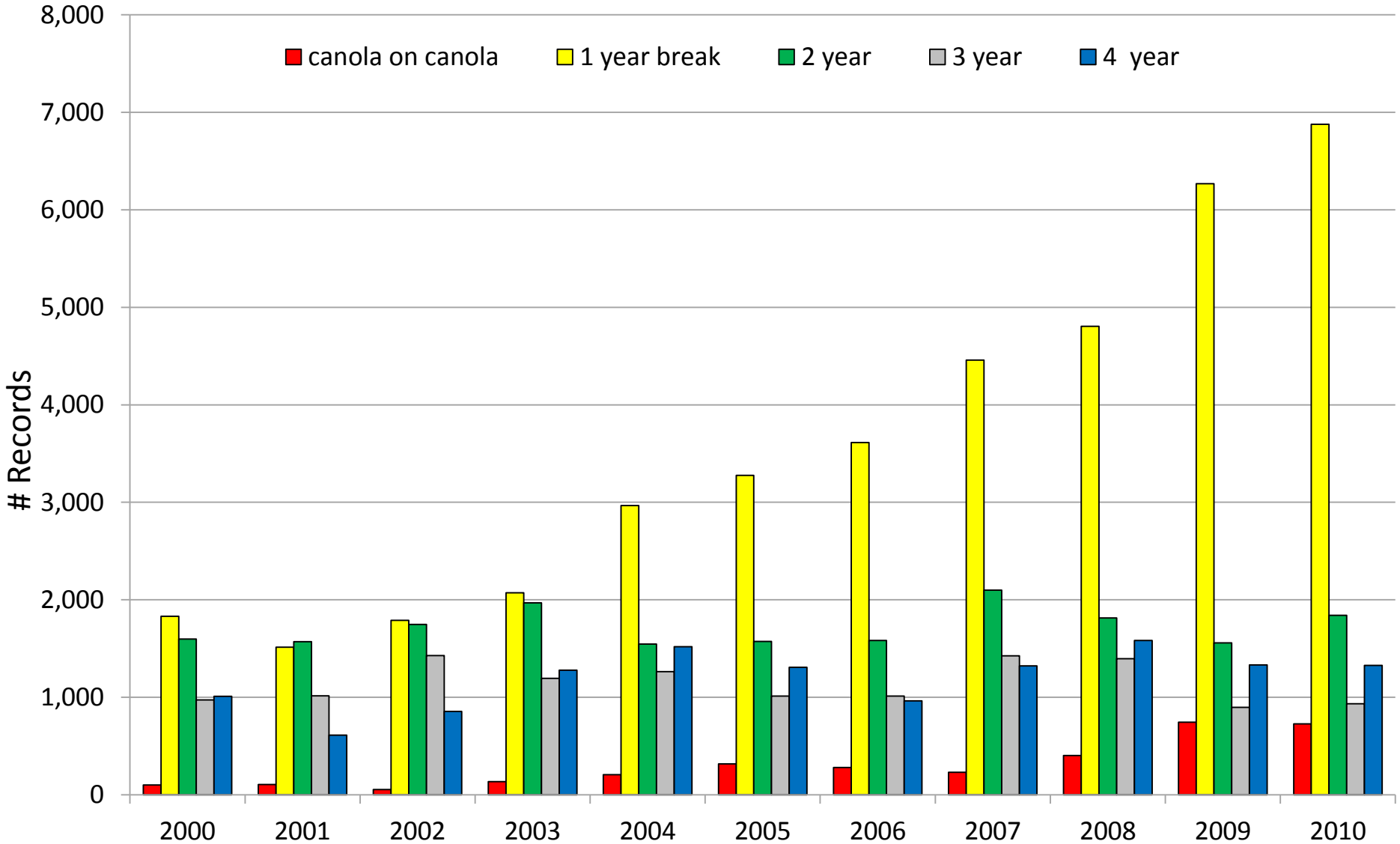


Aaron Van beers

Crop Rotation

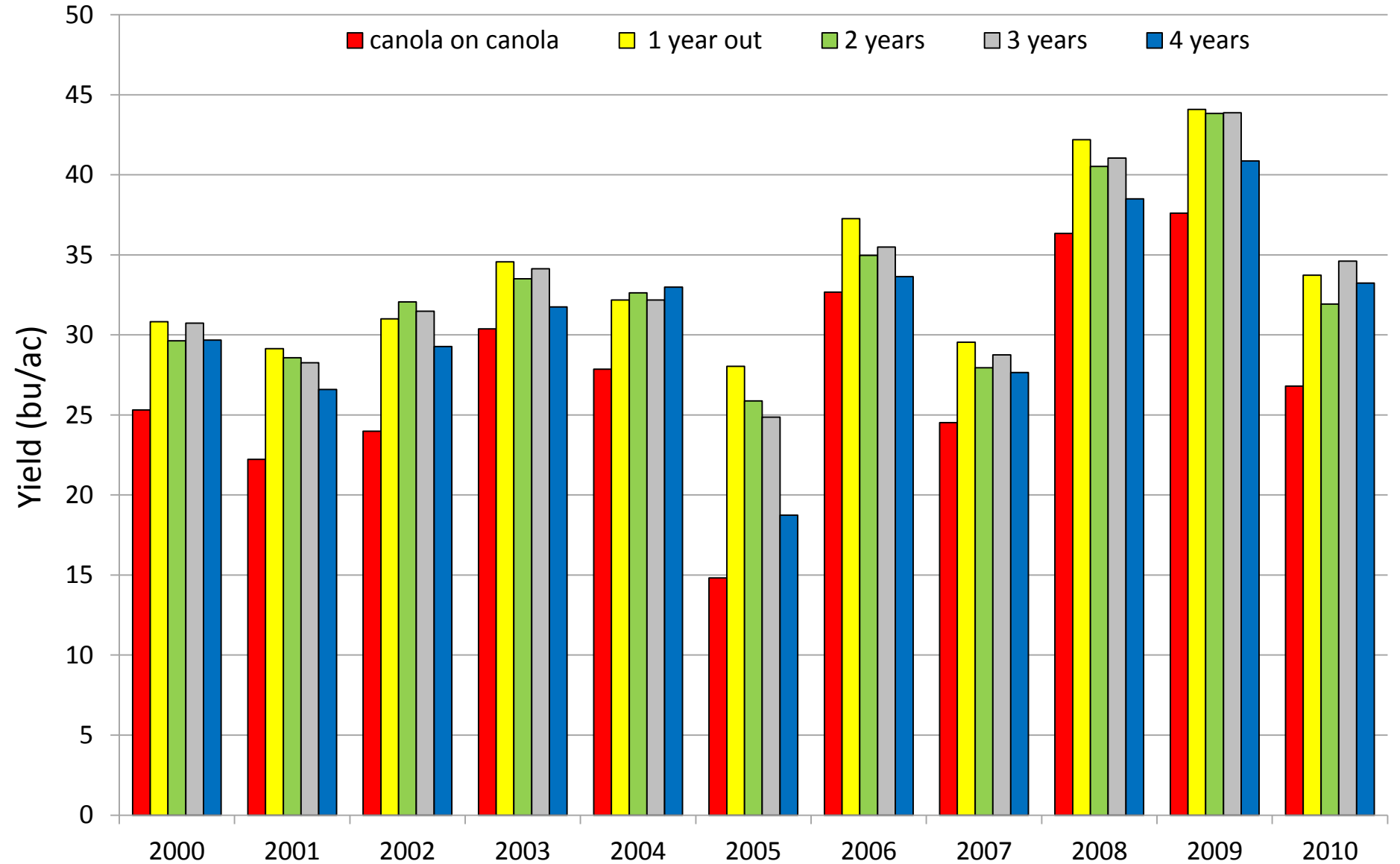
- **What is the ‘optimum’ length for a canola rotation?**
 - Agronomy
 - Economics
 - Resources

Canola Cropping Frequency in Manitoba



Source: MASC

Canola Yield by Rotation Break in Manitoba



Source: MASC

Take Home Message:

- **There is no right answer!**
- **Higher frequency will require more resources**
 - Scouting, pesticide, TIME
- **Every field must be managed individually**
 - There is no 'one size fits all'

Resource Material

<http://www.canolacouncil.org/>

- Canola Encyclopedia
- Clubroot.ca
- Canola Watch
- Canola Performance Trials

Canola Encyclopedia

- **Online version of Canola Production Manual**
 - Broken out into sections ie. Insects, Fertility
 - Current
 - Anything you want to know about canola

Canola Watch

<http://www.canolawatch.org/>

- Free
- Unbiased
- Timely – Weekly during the growing season
- Research focused

Thresholds

Expected Seed Value - \$/bushel											
Spraying Cost - \$/acre	6	7	8	9	10	11	12	13	14	15	16
Number of Larvae/metre ²											
7	20	17	15	13	12	11	10	9	9	8	8
8	23	20	17	15	14	13	11	11	10	9	9
9	26	22	19	17	16	14	13	12	11	10	10
10	29	25	22	19	17	16	14	13	12	11	11
11	32	27	24	21	19	17	16	15	14	13	12
12	34	30	26	23	21	19	17	16	15	14	13
13	37	32	28	25	22	20	19	17	16	15	14
14	40	35	31	27	24	22	20	19	17	16	15
15	43	37	32	29	26	23	22	20	19	17	16

Table 1 - Bertha armyworm thresholds in canola, courtesy of MAFRI

Canola Industry Target



Our goal is to ensure the industry's continued growth, demand, stability and success - achieving 52 bu/acre and 26 MMT by the year 2025.

Keep It Coming

- **Demand:**
 - Increasing world demand for protein
 - Increasing oil demand
- **Supply**
 - Canadian canola
 - Increase/stabilize yields
 - Maintain acres

Yield Increases

- **THE AGRONOMIC ADVANTAGE:**
 - THE FUTURE IS MOSTLY ABOUT APPLYING THE SCIENCE OF AGRONOMICS TO MAXIMIZE THE GENETIC POTENTIAL
- **Genetics**
 - New varieties
 - Disease, traits, yield

Take Home Message:

- **Look for improvements in your operation**
- **This is the road map, you are the driver**
- **If we don't meet the demand someone else will!**

Questions?

