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
   - assess 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:  •
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
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 Seed Pod Weevil Lifecycle

- April: Adults overwinter
- May: Adults emerge and feed on host plants
- June: Adults mate and lay eggs
- July: Larvae feed on developing seeds
- August: Larvae pupate
- September: Adults emerge and feed
- October: Adults go to overwintering sites

Greatest damage
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 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
Field Scale (Large Plot)

- Weigh Wagons
- Varieties must be in Small plot program to be entered in the Field Scale
- Site 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!
Crop Rotation

• What is the ‘optimum’ length for a canola rotation?
  • Agronomy
  • Economics
  • Resources
Canola Cropping Frequency 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**

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