



Ontario Bean Growers Summer Meeting  
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# This is a.....

- Reflection on 31+ years of service to this industry
- Find the best path forward for the dry bean industry of Ontario
- Collection of experiences, evidence and opinion
- Constructive comments, not negative (not targeting anyone)

# Our goal as an industry.....

- Produce healthy food for a profit
- Keep dry beans competitive with other field crops in Ontario
- Production problems and level of management needed, yield gains, GMO's (pests like problem weeds)

# Disease/Pest Testing and Surveys

- Need more consistent effort each year (permanent working group)
- Greater collaboration between industry/research/extension
- For SCN, root rots, bacterial, anthracnose, white mold, insects
- Is the organism present at research sites (SCN)
- What organism do we have (CBB vs BBS)
- What organism/species is common (Fusarium or Rhizoctonia)

BETTER INFORMATION/COORDINATION

# Anthracnose

- Controls: Great tools (genetics, clean seed, fungicides, seed trt)
- There is a sexual phase so new races are common (NEG for genetics)
- No outbreaks since 2008 (WHY? fungicide use in seed crops)
- Seed treatments reduce the risk on seed (but mask the problem)
- Fungicides for field outbreaks (act as vaccine)

CLEAN SEED #1

# White Mold

- Controls: genetics (+ plant architecture), management, fungicides
- Management (rotation, tillage) and genetics have moderate effect
- Disease forecasting can help, but need field scouting/experience
- Alternative foliar products have been ineffective to date

## FUNGICIDES FIRST!

- Testing could be cut in ½ (offered as new products are available)

# Bacterial Diseases (CBB, BBS)

- Controls: genetics, clean seed, foliar products, seed trt
- Foliar products (Parasol) and seed trt are weak
- Clean seed is effective but expensive with difficult logistics
- Genetics are key but missing large seeded beans (bigger issue)
- BBS highlights the need for disease surveys

GENETIC RESISTANCE IN KIDNEY/CRAN

# Potato Leafhoppers

- Controls: foliar insecticides, seed trt, genetics?
- Problem until 2007, ramping up recently?
- Need to scout and apply insecticides using thresholds
- We still have a neonic seed trt for now
- Cyhalothrin lambda under review but new foliar insecticides coming?

SCOUT + INSECTICIDES



# SCN

- Controls: genetics, cultural, seed trt
- Causes crop stunting + root rot + SDS-type disease
- Soil infestations last forever
- Seed trt (chemical and biological) provide short term control
  - 70% control of 1<sup>st</sup> generation in a field season (kidney bean)
- Clear evidence of market class tolerance
- Do different SCN races have the same impact? (PI 88788 gene)

## GENETICS

# Western Bean Cutworm

- Controls: foliar insecticides, genetics?
- Causes late season pod and seed damage
- Overwintering population + moths from neighbouring states
- Multiple issues include scouting, thresholds, timing of controls

**INSECTICIDE 10-14 DAY AFTER PEAK MOTH FLIGHT**

# Azuki

- New species, can't assume they act as a dry bean
- Fertility – N, P, K placement, micros (funding)
- Planting dates and populations
- New cultivars?
- SCN – highly susceptible, any genetic tolerance?
- WBC – host? impact?

EVERYTHING ASAP

# Fertility

- P (banded) or S or micros (we expect a minor response)
- Impacted by soil type, pH
- Funding from SCAP Pulse Cluster project (Sustainable CAP)

JUSTIFY BANDED P, S, Zn, Mg, Mn

# Nitrogen

- We have done 4 major N fertilizer studies in 30 years (80+ data points)
  - Replicated small plot and large strip plots
- Minimal yield response to N fertilizer (agrees with MB)
- Reduce nodules with excess N or sidedressed N (MB data)

ON FARM SIDE BY SIDE

# Cultivar Performance Testing

- A service to Ontario growers (+ important for breeders)
- Subject to 10% overhead in 2024 (more to come?)
- Soybeans \$32.85 per plot x 384 plots = \$12613
  - Simple weed control, no pest management, direct harvest, minimal lab work
- Dry Beans \$23.44 per plot x 524 plots = \$12280
  - Passes for weeds (2), pests (3+), off station, hand harvest, major lab work

**INCREASE FEES AND FIND EFFICIENCY**

# THANK YOU!

Growers/Industry – Strong and unwavering support (\$4,000,000+)

- Together we have accomplished more than anyone else

Students – summer (60+), graduate (15+), diploma (1000's)

- Some of my greatest accomplishments

Technicians – Don and Ted (Dianna, Walt, Lisa, Steve, Erin, Stephen)

- You are only as good as your people. I work with some truly amazing people!

Colleagues – Peter, Meghan, Jocelyn, Bob, Jamie, Owen and others

- Pick good dance partners and try not to step on their feet