Reaching 52 bu/ac of Canola by 2025

Warren Ward
Agronomy Specialist
Canola Council of Canada
Who is the Canola Council of Canada?

- Growers
- Exporters
- Life Science
- Processors
52 by 2025: How we’ll get there

OUR TOOLS FOR INCREASING YIELDS:

- Harvest Management: +2 BU
- Integrated Pest Management: +2 BU
- Fertility Management: +3 BU
- Plant Establishment: +3 BU
- Genetic Improvements: +8 BU

3-YR AVERAGE YIELDS: 34 BU (2011-13)

41 BU CURRENT (2016-18)
20-Year Canola Yield Trend

Source: Statistics Canada, Table 32-10-0359-01

*Estimate as of Sep 12, 2019
Genetic Potential

• 2019 Canola Performance Trials
  – Average plot yield = 58.8

• Why the difference from Stats Can?
  – Reduced variability…field selection
  – Agronomic management
Priority 1: Fertilizer

- Fertilize for an ambitious yield target
  - 45-50, 50-55…

- Re-evaluate your right rate
  - Soil test

- Additional fertilizer is a low risk investment
  - Marginal increases to support yield
Brandon 2016 example

**Base rate:** 119 lbs / ac (61.98 bpa)

**Treatment rate:** 149 lbs / ac (65.37 bpa)

**Yield Improvement:** 3.4 bpa +

**Residual N:** 15 lbs (+ 4% OM *not accounted for*)

\[
\begin{align*}
134 / 61.98 &= 2.16 \text{ lbs / bushel} \\
164 / 65.37 &= 2.5 \text{ lbs / bushel}
\end{align*}
\]

**Marginal Cost:** 30 lbs/ac * $0.50/ lb = $15.00 / ac

**Marginal Return:** $10.50 / bu * 3.4 bpa = $35.60 / ac

**Profit:** $20.6 / ac

**Marginal Revenue:** $2.42 / $1 N
Priority 2: Aim for 75% Seed Survival

• Target a plant density of 5 - 8 plants ft$^2$
• Typically 50 – 60% seed survival
• Environmental conditions are largely out of our control…
  – But, manage those situations that are within their control
    • consistent seed depth/seed-to-soil contact
    • 0.5-1” depth
    • Limit seed-placed fertilizer
    • seed timing (into somewhat warmer soils)
• Take Plant Counts!
Priority 3: Pick the Right Variety for the Field

• Base variety decisions on the best traits for each field

• Yield is always important, but give strong consideration to other traits
  – Disease resistance
    • i.e. clubroot, blackleg
  – Harvest management
  – Maturity
Priority 4: Protect Yields from Sclerotinia

- Sclerotinia stem rot remains the most costly canola disease across Western Canada
  - Keep sclerotinia infection less than 5%
- Challenge of making fungicide application decision
  - Conditions supporting high yields also favour sclerotinia
  - New technology and tools (sensors, petal tests, weather stations, genetic resistance) can help
    - All predictive tools have limitations
  - If in doubt, lean toward spraying
    - Leave a checkstrip!
Priority 5: Aim for Less than 2% Harvest Loss

- Harvest losses can be 5% or higher…
- Routinely measure and quantify losses, make the necessary adjustments
- Do not rely on loss monitors
Minimize your risk and maximize your profit
with this suite of canola tools

- Target Plant Density Calculator
  Learn how to set a target plant density in plants/ft² or plant/in² that fits with your individual field conditions, abilities and appetite for risk.

- Seeding Rate Calculator
  Calculate your optimum canola seeding rate or use this calculator after seeding to understand your emergence.

- Combine Optimization Tool
  Optimize your combine settings to improve canola harvest.

The Canada Calculator tools are made available to assist canola growers with respect to agronomic practices, but should not be used as a replacement for professional advice. Consultation with an agronomist or lab analysis is strongly recommended prior to implementing any changes in seeding practices. The Canada Council of Canada disclaims any liability for any direct or indirect damages resulting from use of the Canada Calculator tools.
Thank You!

• Questions?

Warren Ward
Agronomy Specialist
Canola Council of Canada
wardw@canolacouncil.org