

Minnesota Canola Conference

Direct Harvest/Swathing

December 1, 2022

Roseau, MN



UNIVERSITY OF MINNESOTA

Canola Production in MN

- **If successful with current canola management practices, why change?**
- **Become more efficient**
- **Reduce cost**
- **Improve yields**
- **Spread out equipment and labor requirements**
- **Improve profitability**

Iowa Custom Rate Survey - 2022

- **This survey gives an approximate cost for various farming operations**
- **Seeding with a planter = \$23.40**
- **Seeding with a drill = \$17.70**
- **Combine with a draper head = \$38.75**
- **Combine with pickup head = \$31.15**
- **Swathing/windrowing = \$14.30**

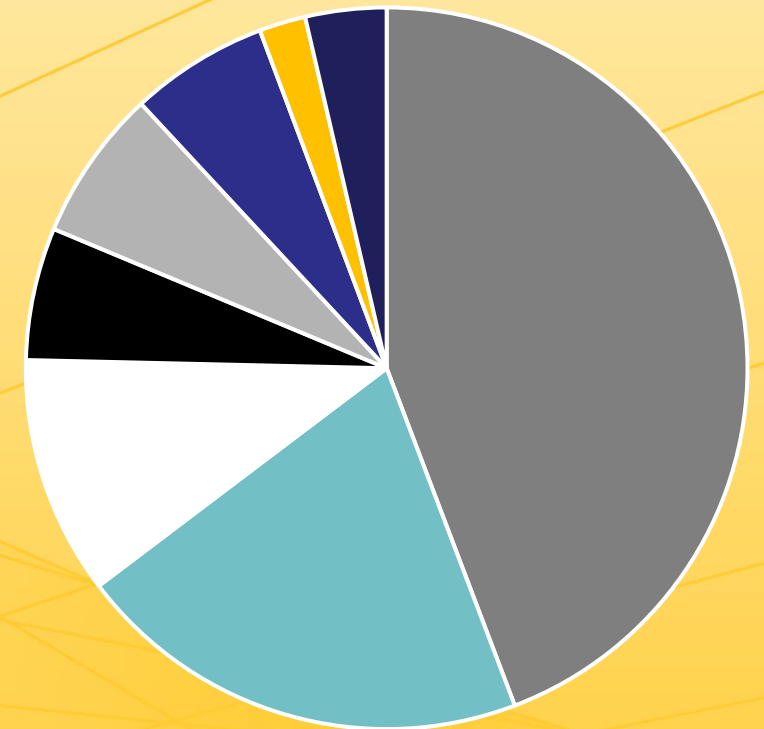


Canola Direct Costs 2022 = \$304.33

Source: NDSU Crop Budgets for NE ND

- Fertilizer = \$133.92 (44%)
- Seed = \$62 (20.3%)
- Herbicides = \$32.3 (10.6%)
- Repairs = \$20.54 (6.7%)
- Fungicide = \$18.00 (5.9%)
- Fuel & Lube = \$18.77 (6.2%)
- Crop Ins = \$11.00 (3.6%)
- Op Interest = \$6.3 (2.1%)

Canola Direct Costs



■ Fertilizer ■ Seed ■ Herbicides ■ Fungicides
■ Repairs ■ Fuel&lube ■ Interest ■ Crop Ins



Direct Harvest Canola

Advantages

- Higher yields
- Less green seed
- Better quality seed
- Only have to go over the field with one harvest operation

Disadvantages

- Canola can be in the field for a long time. Late October in 2022
- Slow combine harvest speed
- Speed of canola dry down, especially in a late year
- May have seed shatter and pod drop if harvest is delayed.



Swath and Harvest Canola

Advantages

- **Uniform maturity as once swathed plants begin dry down phase**
- **If canola field has weeds swathing will speed dry down of weeds**
- **Better able to schedule harvest (2 to 3 weeks after swath)**

Disadvantages

- **Swaths may roll in high winds**
- **Swathing early may increase green seed count**
- **Requires additional equipment**



Canola Shatter Trial After 27 Days

Variety Prone to Shatter in Center



Seeds and Pods in Collection Pan



Canola Desiccation Trial: 9/18/19

Roundup + Sharpen 1.5 pt + 2oz/ac



Reglone 1.5 pt/ac



Direct Harvest Trial - Harvest

Untreated L; Roundup+Sharpen R



Direct Harvest Trial Day of Harvest



Direct Harvest and Swath and Harvest of Canola - Advantages and Challenges

- **Questions to ask the Panel**
- **What canola harvest strategy works for you?**
- **What are the successes?**
- **What are the challenges?**
- **Any planned harvest management changes in 2023?**

On-Farm Survey of Combine Grain Loss in Canola from 50 combines in Western Canada - 2019

Combine Loss Variables	Variable Boundaries	Average Losses (bu/ac)	Number of Combine Test Repetitions	Conclusions
Ambient Temperature	< 23.0°C	1.4	96	Significantly lower losses experienced with higher ambient temperature.
	≥ 23.0°C	0.8	36	
Relative Humidity	< 45% RH	1.2	108	Significantly lower losses experienced with lower relative humidity.
	≥ 45% RH	1.6	24	
Weather Conditions	Sunny	1.0	33	Significantly lower losses experienced with sunny conditions compared to cloudy and partially cloudy compared to cloudy.
	Partially Cloudy	1.1	60	
	Cloudy	1.7	39	
Harvest Practice	Straight-Cut	1.5	30	More testing required to better understand results.
	Swathed	1.2	102	
Canola Variety	Shatter Resistant	1.3	87	More testing required to better understand results.
	Non-Shatter Resistant	1.1	45	
Ground Speed	< 4.3 mph	1.2	123	Significantly lower losses experienced with slower ground speed. Take note of small sample size for higher ground speed results.
	≥ 4.3 mph	2.2	9	
Grain Feed Rate	< 350.0 bu/hr	0.5	6	Significantly lower losses experienced with lower grain feed rate. Take note of small sample size for lower grain feed rate.
	≥ 350.0 bu/hr	1.3	123	
Combine Age	1993 to 2005	0.8	33	Regarding losses, a well-set older combine can outperform a poorly set newer combine.
	2006 to 2014	1.5	57	
	2015 to 2019	1.3	42	