



2024 MN Canola Symposium Roseau, MN

Welcome

Sara Swenson

The Difference Is In the Pod

Non-Pod Shatter Line



Pod Shatter Reduction Gene



The InVigor Hybrid Naming System

InVigor hybrids are classified according to an easy-to-remember naming system. Every character within the system provides you with specific product information.

InVigor[®]
L340PC

The diagram shows the hybrid name 'L340PC' with five numbered callouts below it. Callout 1 points to the letter 'L'. Callout 2 points to the number '3'. Callout 3 points to the number '4'. Callout 4 points to the number '0'. Callout 5 points to the letters 'PC'.

- 1** The initial letter designates herbicide tolerance (L signifies the LibertyLink[®] technology system, R signifies the TruFlex[®] canola with Roundup Ready[®] Technology).
- 2** First number specifies the series (i.e., 1, 2, 3 and so on).
- 3** Second number represents the maturity rating (i.e., 3 = early, 5 = mid, 7 = long).
- 4** Third number identifies the hybrid in the series.
- 5** Last letter(s) highlights specific agronomic characteristics of the hybrid (i.e., P for Pod Shatter Reduction, C for clubroot resistance and H for InVigor Health hybrids).

The new **InVigor**[®] early-maturing hybrid is here.



Meet the early-maturing hybrid
you've been waiting for.

InVigor[®]
L333PC

You asked, and we answered: the new InVigor early is here.

Introducing InVigor L333PC – our earliest maturing 300 series hybrid.

With the InVigor performance you have come to trust, this hybrid is a great fit for those looking for an earlier-maturing hybrid. With high yield potential, good standability, our patented Pod Shatter Reduction technology and first-generation clubroot resistance, InVigor L333PC is a great fit for those in short and mid growing zones or if you are looking to beat the heat and get the combines rolling early. This hybrid demonstrated great performance in our 2023 Agronomic Excellence trials, making this an exciting new hybrid to try in 2025.

106.3%

of InVigor L233P, BASF internal trials, 2023, n=33

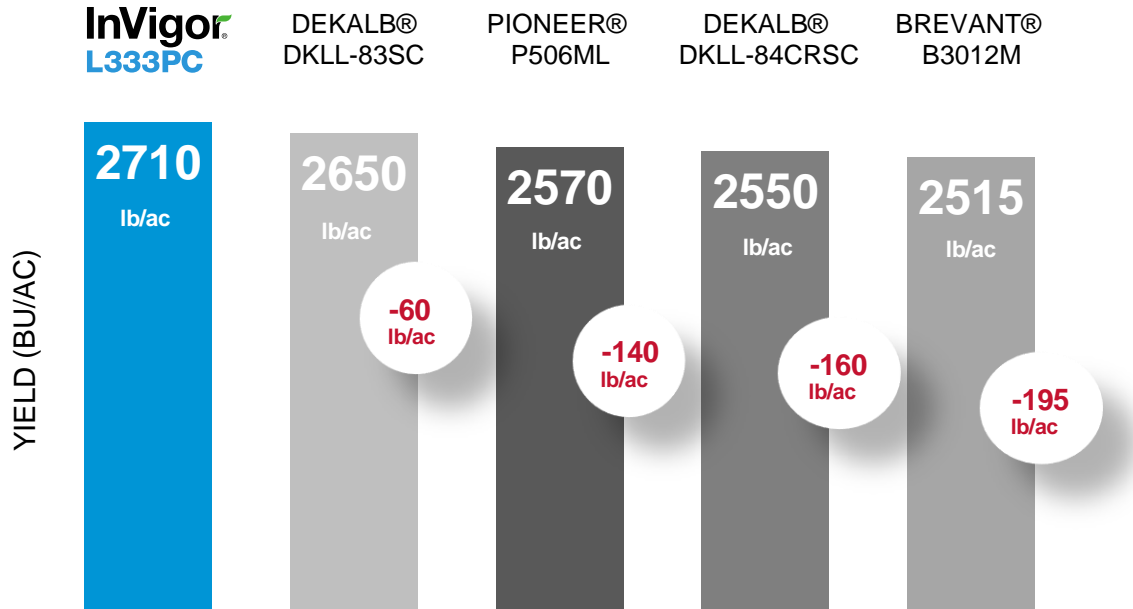
101.8%

of InVigor L340PC, BASF internal trials, 2023, n=33

107.7%

of the checks (InVigor L255PC and Pioneer[®] 45H33), BASF internal trials, 2022 & 2023, n=46

NEW
for 2025



- InVigor L333PC – our earliest maturing 300 series hybrid
- High yield potential with good standability
- Patented Pod Shatter Reduction technology
- First-generation clubroot resistance
- Great fit for those in short and mid growing zones
- InVigor L333PC demonstrated great performance in 2023

Growing Zones	Blackleg Rating	Agronomic Trait			Treated with
All	R (resistant)	Pod Shatter Reduction	First-Gen. Clubroot Resistance	LibertyLink [®] technology system	 Also available with: or <small>INSECTICIDE SEED TREATMENT</small>

n=27

Source: Agronomic Excellence Trials, 2023, n=number of balanced trials.

For harvest ratings or more information, please visit [InVigor-cannoyields.us](https://www.invigorcannoyields.us)

Results may vary on your farm due to environmental factors and preferred management practices.

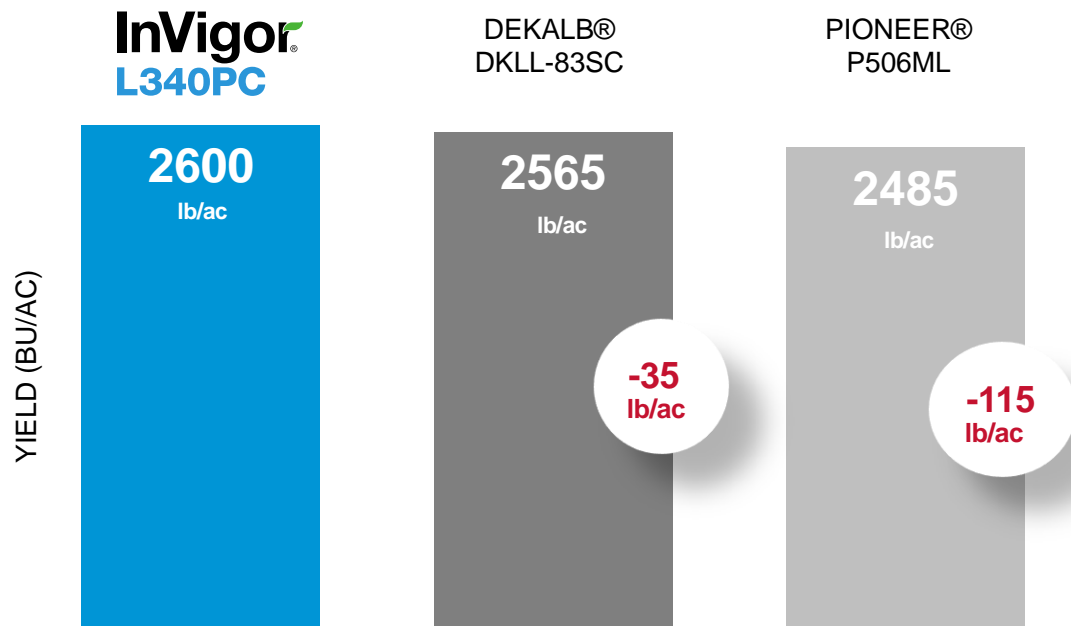
Note: Results were replicated and adjusted for moisture but not for dockage.

107.8%

of InVigor L233P,
2019, n=16

108.9%

of the checks (InVigor L233P and Pioneer[®] 45H33),
WCC/RRC trials, 2019



- As U.S. and Canada's most grown canola hybrid over the last three years, InVigor L340PC excels across all growing zones
- InVigor L340PC has it all – high yield potential, Pod Shatter Reduction, first-generation clubroot resistance and strong standability
- It is a great fit for growers who irrigate or when lodging is a concern

Growing Zones	Blackleg Rating	Agronomic Trait			Treated with
All	R (resistant)	Pod Shatter Reduction	First-Gen. Clubroot Resistance	LibertyLink [®] technology system	 Also available with: or <small>INSECTICIDE SEED TREATMENT</small>

n=28

Source: Agronomic Excellence Trials, 2023, n=number of balanced trials.

For harvest ratings or more information, please visit [InVigor-canolayields.us](https://www.invigorcrops.com/canola/yields)

Results may vary on your farm due to environmental factors and preferred management practices. Note:

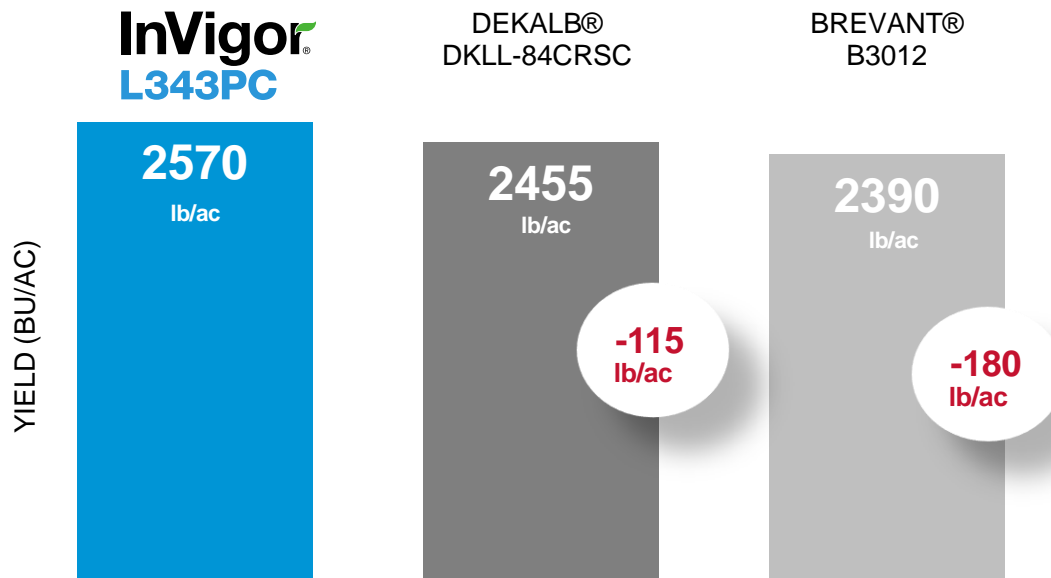
Results were replicated and adjusted for moisture but not for dockage.

106%

of InVigor L233P,
2019 & 2020, n=43

111.3%

of the checks (InVigor L233P and Pioneer[®] 45H33),
WCC/RRC trials, 2019 & 2020



- InVigor L343PC has been Eastern ND's top choice for second-generation clubroot-resistant LibertyLink[®] canola hybrids for two years running
- InVigor L343PC finished in the top three for our 2023 Demonstration Strip Trials, giving you excellent clubroot protection and performance
- It's a great fit for all growers not just those in pockets of Eastern ND that require an extra layer of clubroot protection

We recommend growing InVigor L343PC with second-generation clubroot resistance in clubroot-affected areas after two cycles of growing first-generation clubroot-resistant hybrids or when clubroot symptoms are noticed in first-generation clubroot-resistant hybrids.

Growing Zones	Blackleg Rating	Agronomic Trait			Treated with
All	R (resistant)	Pod Shatter Reduction	Second-Gen. Clubroot Resistance	LibertyLink [®] technology system	 Also available with: or <small>INSECTICIDE SEED TREATMENT</small>

n=34

Source: Agronomic Excellence Trials, 2023, n=number of balanced trials.

For harvest ratings or more information, please visit [InVigor-cannoyields.us](https://www.invigorcannoyields.us)

Results may vary on your farm due to environmental factors and preferred management practices. Note:

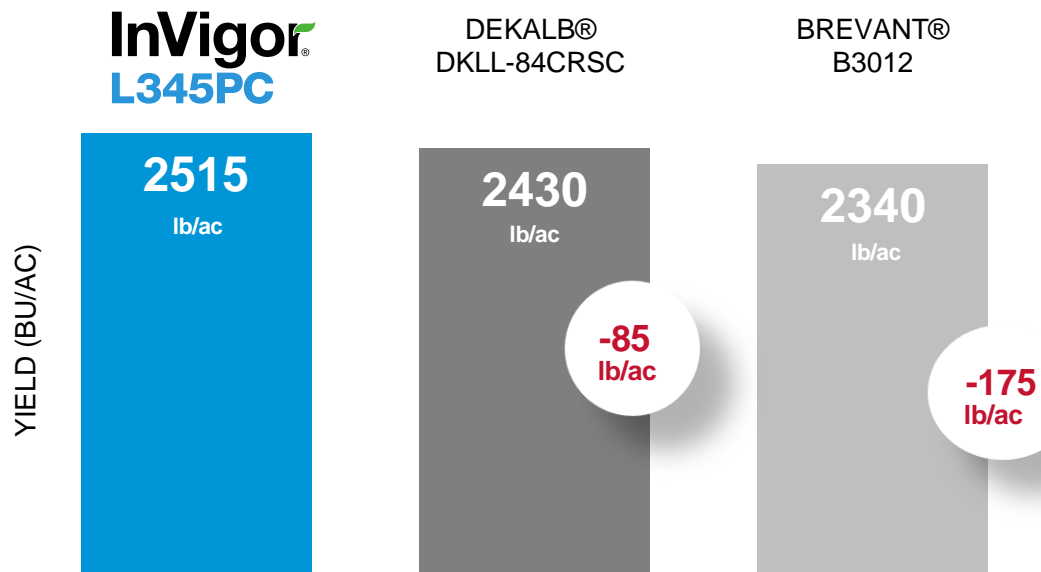
Results were replicated and adjusted for moisture but not for dockage.

111.4%

of InVigor L233P,
2018, n=28

107.5%

of the checks (InVigor 5440 and Pioneer[®] 45H29),
WCC/RRC trials, 2017 & 2018



- InVigor L345PC has consistently been among the top performers in our Demonstration Strip Trials for the past three years
- Enhance the standability of InVigor L345PC by avoiding short rotations, fields with high volunteer canola populations, high levels of fertility or under irrigation

Growing Zones	Blackleg Rating	Agronomic Trait			Treated with
All	R (resistant)	Pod Shatter Reduction	First-Gen. Clubroot Resistance	LibertyLink [®] technology system	 Also available with: or <small>INSECTICIDE SEED TREATMENT</small>

n=30

Source: Agronomic Excellence Trials, 2023, n=number of balanced trials.

For harvest ratings or more information, please visit [InVigor-canolayields.us](https://www.invigorcrops.com/canola/yields)

Results may vary on your farm due to environmental factors and preferred management practices. Note:

Results were replicated and adjusted for moisture but not for dockage.

108.9%

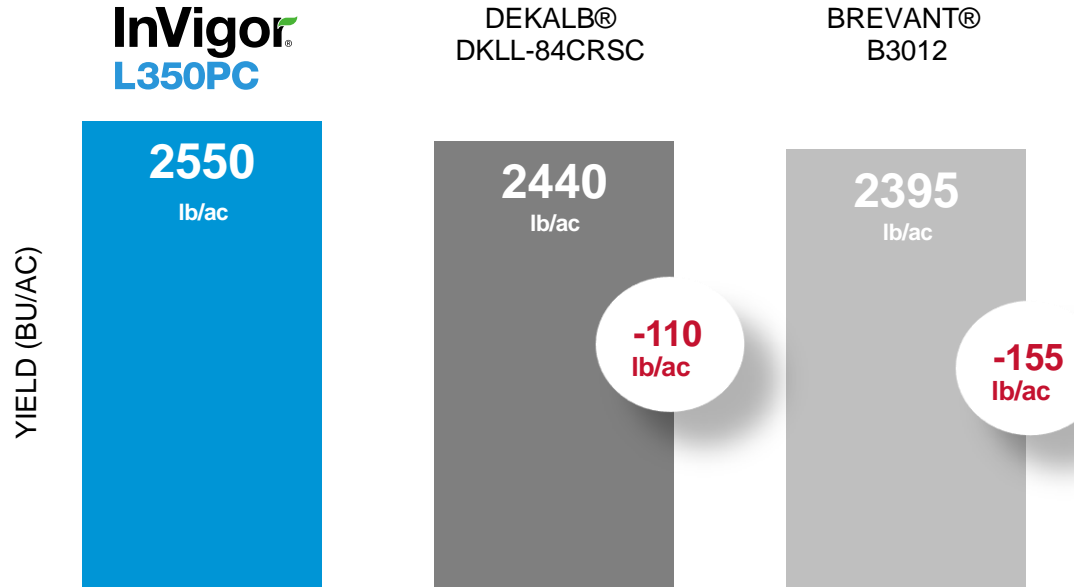
of InVigor L340PC,
2021, n=22

114.3%

of InVigor L233P,
2020 & 2021, n=36

115.6%

of the checks (InVigor L255PC and Pioneer[®] 45H33),
BASF internal trials, 2020 & 2021



- Looking for a hybrid that thrives in the mid to long growing zones? InVigor L350PC features high yield potential, strong standability, first-generation clubroot resistance and our patented Pod Shatter Reduction technology
- It is a great fit for growers who irrigate or when lodging is a concern

Growing Zones	Blackleg Rating	Agronomic Trait			Treated with
Mid to Long	R (resistant)	Pod Shatter Reduction	First-Gen. Clubroot Resistance	LibertyLink [®] technology system	
					Also available with:
					or

n=30

Source: Agronomic Excellence Trials, 2023, n=number of balanced trials.

For harvest ratings or more information, please visit InVigor-canolayields.us

Results may vary on your farm due to environmental factors and preferred management practices. Note:

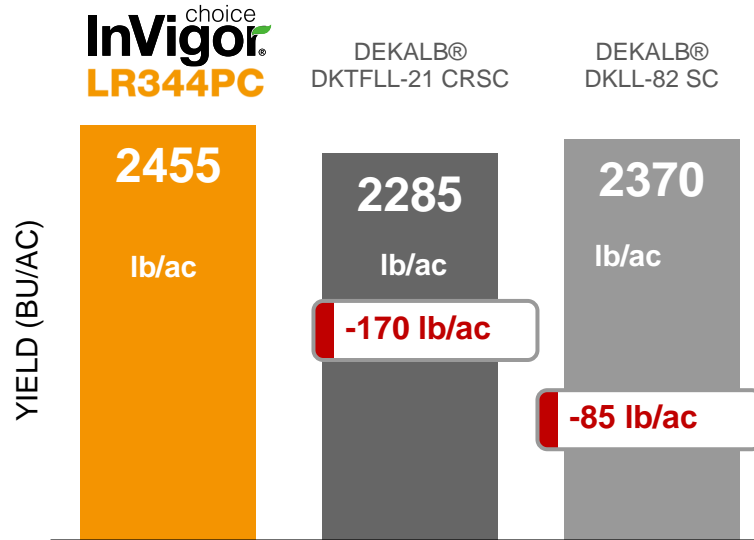
Results were replicated and adjusted for moisture but not for dockage.

104.1%

of the checks
(InVigor L233PC and Pioneer[®] 45H33) in
2018 WCC/RCC trials

103.6%

of InVigor L233P
(n=12, 2018)



InVigor Choice LR344PC offers high yield potential and great standability with the added flexibility of harnessing both the LibertyLink[®] technology system and TruFlex[®] canola with Roundup Ready[®] Technology.

Visit InVigor-CanolaYields.us to see how this hybrid performed in your area.

Growing Zones	Blackleg Rating	Agronomic Trait			Treated with
Mid to long	R (resistant)	Pod Shatter Reduction	First-Gen. Clubroot Resistance	LibertyLink [®] technology system and TruFlex [®] canola with Roundup Ready [®] Technology	Helix[®] Vibrance[®]
					Also available with:
					BUTE[®] start Or Lumiderm[™] <small>INSECTICIDE SEED TREATMENT</small>

n=9

Source: InVigor USA Demonstration Strip Trials, 2020, n=number of balanced trials.

Number of trials vary by comparison

For harvest ratings or more information, please visit InVigor-canolayields.us

Results may vary on your farm due to environmental factors and preferred management practices.

Note: Results were replicated and adjusted for moisture and dockage.

110.9%

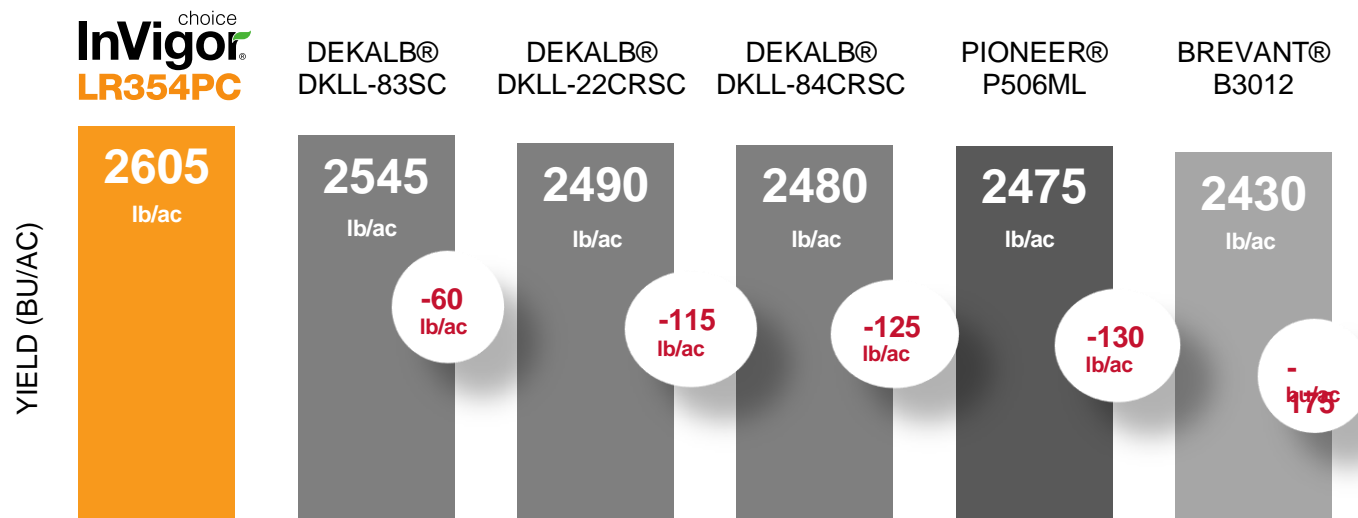
of InVigor Choice LR344PC,
2020 & 2021, n=33

112.5%

of InVigor L233P,
2020 & 2021, n=33

114.3%

of the checks (InVigor L255PC and Pioneer® 45H33),
BASF internal trials, 2020 & 2021



- InVigor Choice LR354PC offers you high yield potential and great standability
- The added flexibility of harnessing both the LibertyLink® technology system and TruFlex® canola with Roundup Ready® Technology

Growing Zones	Blackleg Rating	Agronomic Trait			Treated with
Mid to long	R (resistant)	Pod Shatter Reduction	First-Gen. Clubroot Resistance	LibertyLink® technology system and TruFlex® canola with Roundup Ready® Technology	 Also available with: Or <small>INSECTICIDE SEED TREATMENT</small>

n=24

Source: Agronomic Excellence Trials, 2023, n=number of balanced trials.

For harvest ratings or more information, please visit InVigor-canolayields.us

Results may vary on your farm due to environmental factors and preferred management practices. Note:

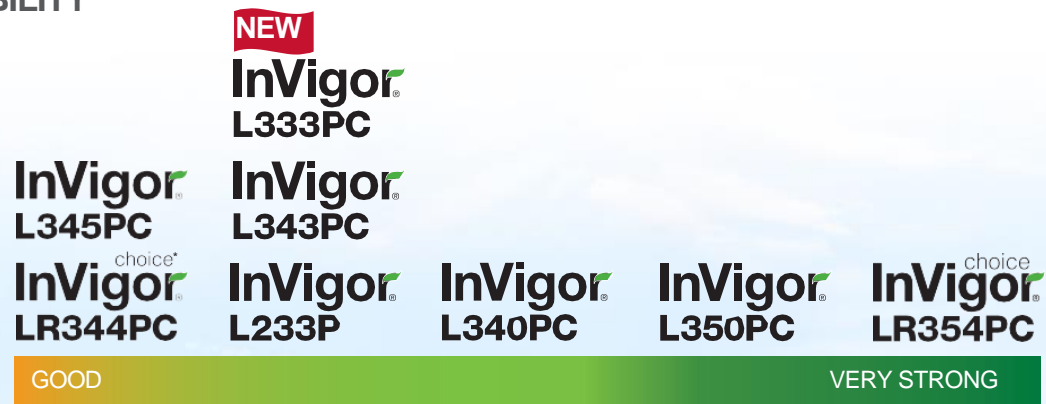
Results were replicated and adjusted for moisture but not for dockage.

2025 Hybrid Maturity and Standability

MATURITY



STANDABILITY



InVigor Demonstration Strip Trial (DST)



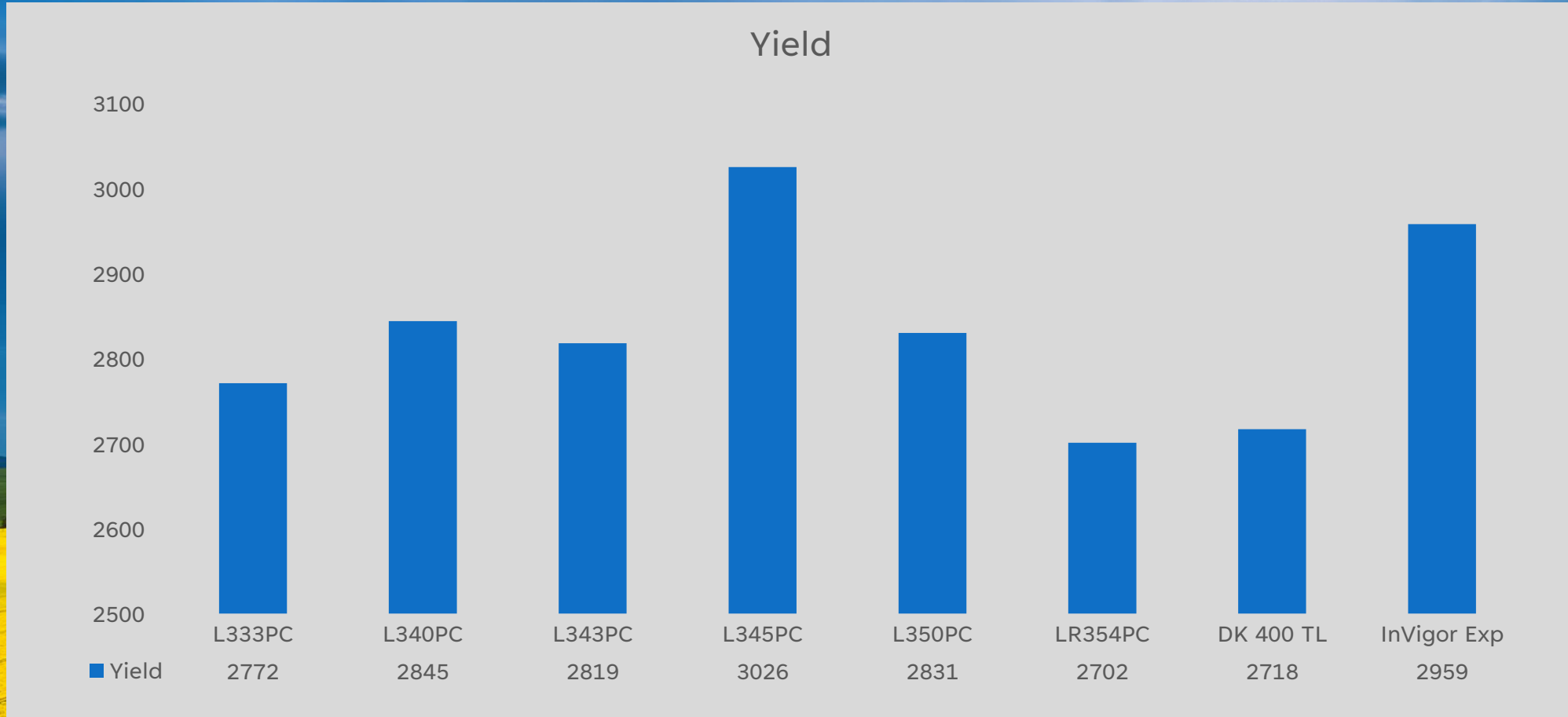
- **InVigor DST Objective**
- Primary objective is to maintain/grow the InVigor business and provide technical support to sales and marketing
- Proving the agronomic and economic benefit of growing canola in USA and Western Canada
- Supporting the marketing team with their strategies to sell InVigor and acquire results for new hybrids and competitor comparisons
- Utilized for:
 - Tours (sales, agronomists, retailers, growers) to showcase presently registered and non-registered InVigor Hybrids
 - Reliable/Local yield data
 - Agronomic demonstrations of best practice
 - Confirm small plot findings in regards to yield and geographical fit.

DST Location Map - 2024



Thief River Falls MN DST 2024

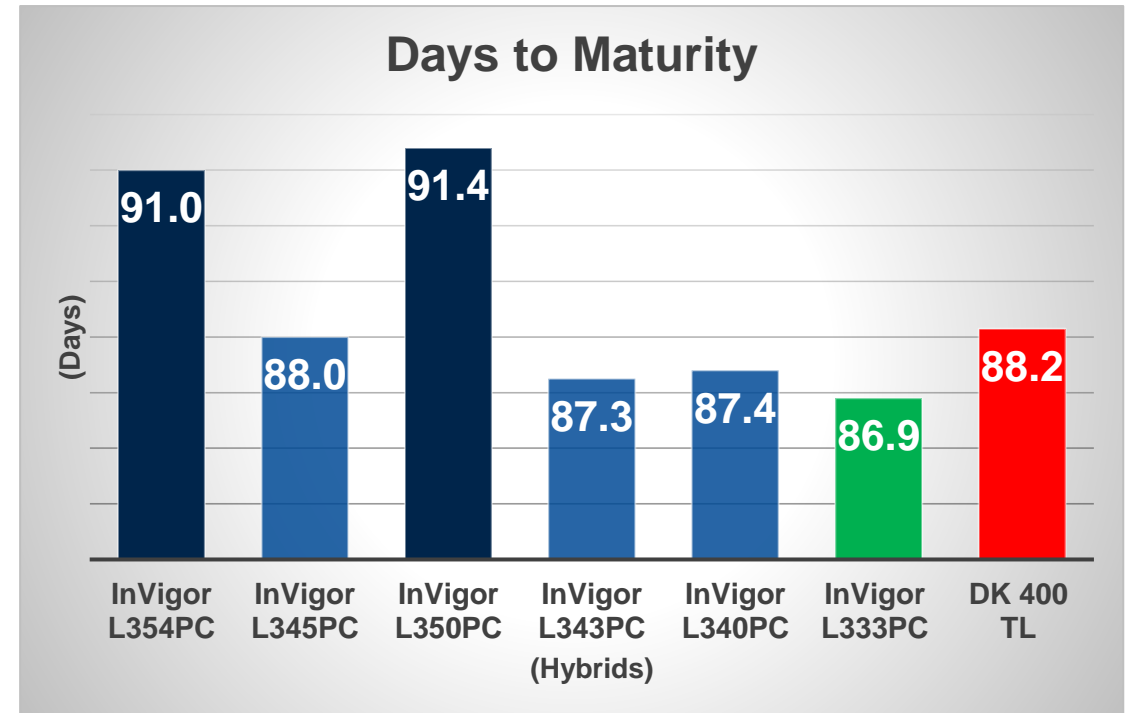
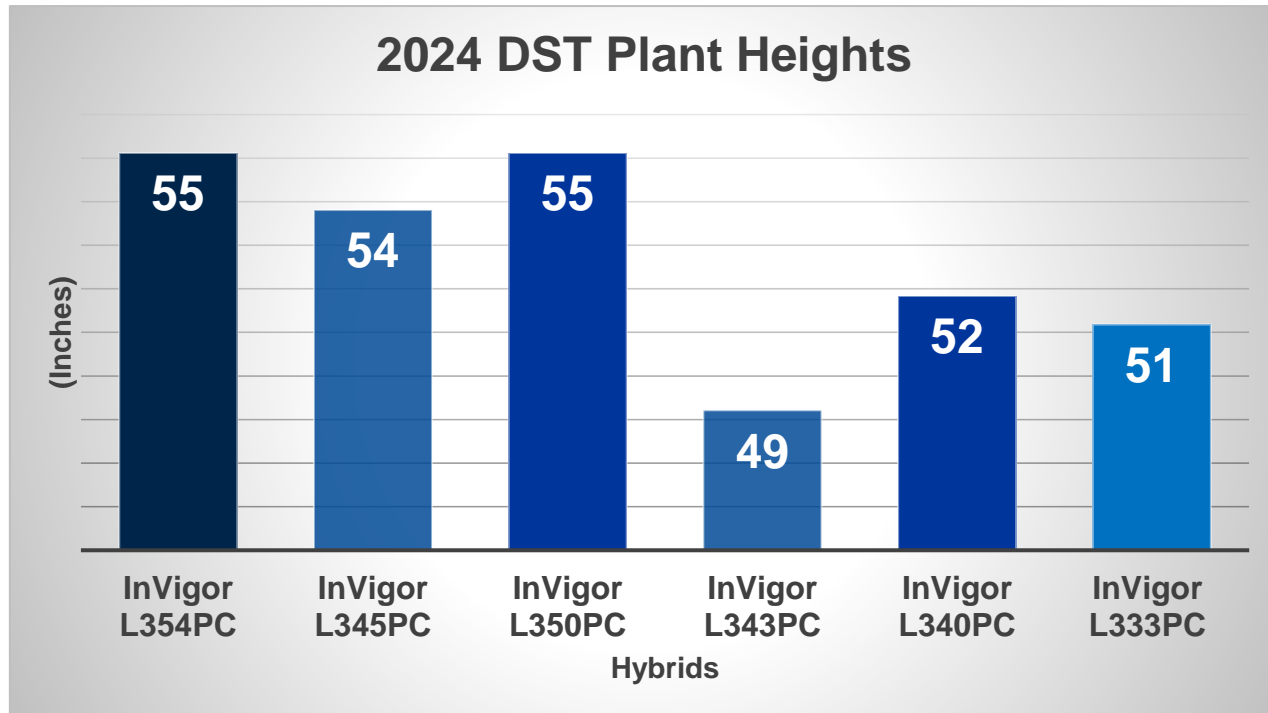
2 reps



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DST = Demonstrarrion Strip Trials.

InVigor®

Plant Heights and Maturities



*Days to physiological maturity

n=6

INVIGOR CANOLA SEED TREATMENT OPTIONS



Supplier: Syngenta
Pests: Diseases & flea beetle
Active Ingredients:

- Thiamethoxam (*insecticide*)
- Difenoconazole (*fungicide*)
- Metalaxyl-M (*fungicide*)
- Fludioxonil (*fungicide*)
- Sedaxane (*fungicide*)

Proven, effective seed treatment option for key canola diseases & base flea beetle protection

*Base on all InVigor hybrid canola seed**



Supplier: Corteva
Pests: Cutworm & flea beetle
Active Ingredients:

- Cyantraniliprole (*insecticide*)

Great option for farmers seeking improved flea beetle protection & cutworm protection

Optional choice on all InVigor hybrids



Supplier: Bayer
Pests: flea beetle
Active Ingredients:

- Flupyradifurone (*insecticide*)

Excellent new solution for farmers in 2025 to manage flea beetles.

Optional choice on all InVigor hybrids

Program Period: 10/1/2024 – 9/30/2025; Released: 6/1/2024

2025 InVigor[®] Early Book Grower Program

Qualification: Retailer must submit¹ Grower Early Book by the Early Book By date.

Participating Brands	Early Book By	Incentive			
		%	On	Issued	Maximum
InVigor canola seed	12/10/2024	\$60/unit ²	POS ³	On or about 11/30/2025	Up to 130% of Early Book quantity

¹ To submit, login to Data Dimensions (<https://www.yourdatadimensions.com>) to enter seed order specifying hybrid, package size, and seed treatment selections.

² For SKU conversion: 1 paper bag = 1 unit and 1 tote/mini-bulk = 20 units

³ Retailer must report POS as determined in the Retailer T&Cs.

See here for Definitions and Terms & Conditions that govern the Program:
bit.ly/BASF-TC



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See official program document for full details. Terms and conditions apply.

Program Period: 8/1/2024 – 9/30/2025; Released: 7/8/2024; Updated: 11/11/2024

2025 Finance

Grower Program



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Qualification: Grower must purchase the Minimum Initial Purchase from a John Deere Financial Merchant¹ or Rabo AgriFinance Authorized Retailer² during the Program Period.

Participating Brands ³	Minimum Initial Purchase	Program Period	Financing Rate Incentive ⁷	Payment Terms ⁸
All Participating BASF Crop Protection and Seed Treatment Products ⁴ and Fungicide Application ⁵	\$5,000	10/1/2024 – 3/15/2025	Fixed 0% APR	November 2025
		3/16/2025 – 9/30/2025	Fixed 4.99% APR	
InVigor [®] canola seed and Clearfield [®] and Provisia [®] seed ⁴	\$5,000	10/1/2024 – 3/15/2025	Fixed 1.99% APR	November 2025
		3/16/2025 – 9/30/2025	Fixed 4.99% APR	
Xitavo [®] soybean seed ⁶	\$5,000	8/1/2024 – 1/15/2025	Fixed 1.99% APR	November 2025
		1/16/2025 – 7/31/2025	Fixed 4.99% APR	



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2025 InVigor[®] Replant Grower Claims Program

Participating Brands	Event Dates	1 st Planting	Replant Incentive ³		Geography	
			%	On Issued		
InVigor canola seed	4/16/2025 – 6/29/2025	Base treatment	75%	Suggested Grower Price List for second planting	On or About 30 days after BASF approval ⁴	ID, MN, MT, ND, OR, SD, WA
		Base treatment + Buteo ^{®2} or Lumiderm ^{®2}	100%			

Qualification¹: Grower must (1) use sound agronomic management, making every attempt to establish a stand and produce a crop; (2) for the first planting have an event due to wind, frost, hail, rain, soil crusting, temperature, disease, or insects that occurs during the Event Dates; (3) demonstrate Best Management Practices as established by University Extension Services for local growing region for seeding, disease and insect control, and other acceptable farming practices; (4) replant with the original or comparable InVigor canola seed variety with the same trait technology; and (5) **sign** the BASF Shared Risk Claim Replant Form.

Retailer must contact local BASF Sales Representative prior to tillage and replant, provide all invoices for the first planting and replant, and **sign** the BASF Shared Risk Claim Replant Form.

BASF Sales Representative must inspect the field prior to tillage and replant, verify eligibility, submit claim within 2 weeks after the replant date, and **sign** the BASF Shared Risk Claim Replant Form.

See here for Definitions and Terms & Conditions that govern the Program:
bit.ly/BASF-TC



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See official program document for full details. Terms and conditions apply.





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Transforming Glufosinate

Liberty[®] ULTRA

Herbicide -- Powered by Glu-L Technology

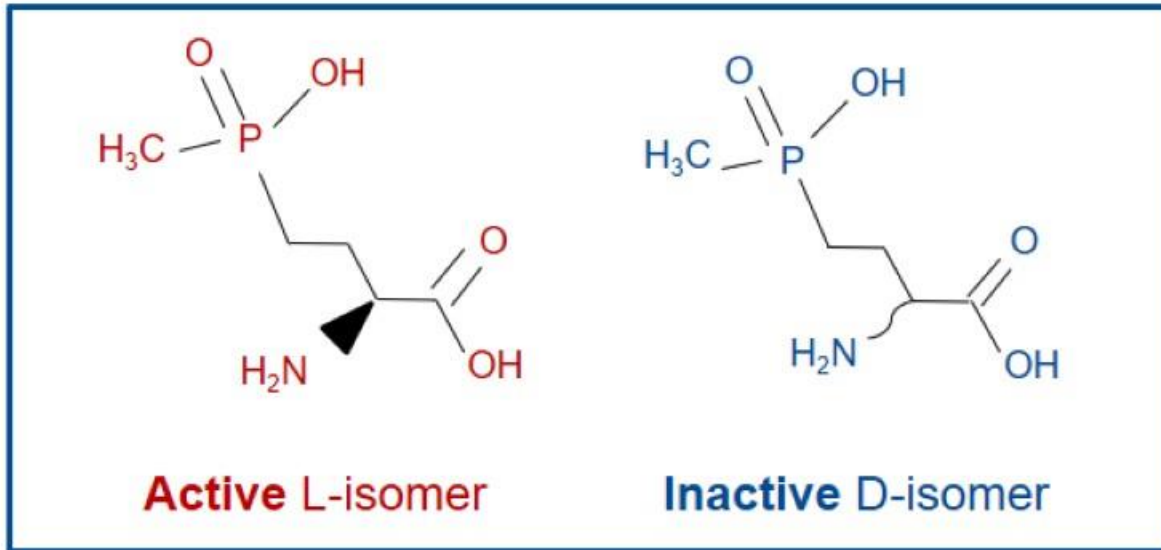


The Future of Liberty[®] Herbicide from BASF

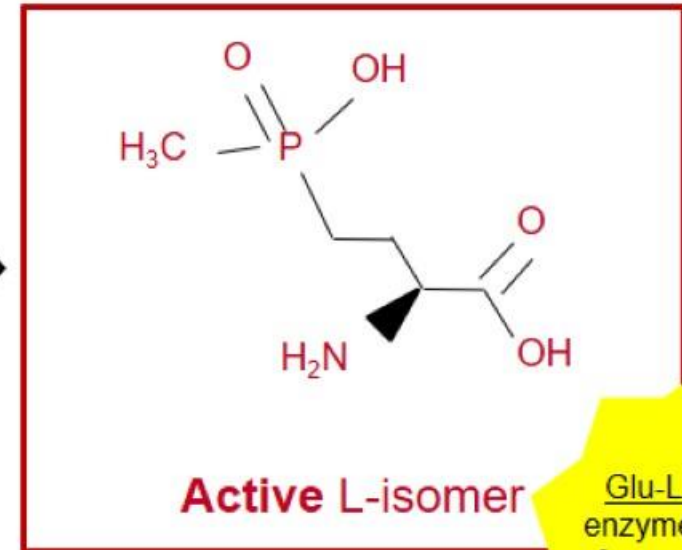
Liberty[®] ULTRA, Powered by Glu-L[™] Technology



Liberty[®] 280 SL



Liberty[®] ULTRA



Glu-L Inhibits the enzyme responsible for metabolizing N in the weeds, Glu-D does not

Glu-L Technology concentrates the active isomer in the final formulation.

L-Glufosinate is not currently registered for sale or use in the United States and is not being offered for sale. This information is provided for educational purposes only and is not intended to promote the sale of this product. Any sale of this product after registration is obtained shall be based solely on the EPA-approved product label, and any claims regarding product safety and efficacy shall be addressed solely by the label. Application rates shown are only illustrative examples and are not intended to indicate approved label rates. Always read and follow label directions. Glu-L Technology is a trademark and Liberty is a registered trademark of BASF Corporation. ©2023 BASF. All Rights Reserved.

Efficient Product Handling

Less Volume, More Acres



Current vs Future Use Rate Examples (fl oz / A)

Liberty [®] 280 Herbicide	Liberty [®] Ultra Herbicide
29 fl oz/A	19 fl oz/A
0.53 lbs ai/A (Glufosinate-Ammonium Equivalent)	0.52 lbs ai/A (Glufosinate-Ammonium Equivalent)

- **Volume Reduction Allows You To Do More with Less:**
 - Increase acres covered
 - Increase number of applications
 - Increase customers served
 - Increase return on investment

BASF Canola Crop Protection Portfolio

Add MSO @ 1 pint/A + AMS @ 17-100 lbs/gal with all Sharpen applications. Glyphosate can also be tank mixed.

InVigor®

L233P
L333PC*
L340PC
L343PC
L345PC
L350PC
LR344PC
LR354PC

*NEW for 2025

Priaxor®

Xemium® Brand Fungicide

Liberty®

Herbicide

- Apply Priaxor and Liberty at V2-V6:
- Apply Priaxor for Plant Health & black leg control
- Apply Liberty herbicide to Invigor Canola for effective weed control.
- Apply Priaxor + Liberty in a tank mix to Invigor Canola.

V2 – V6 Growth Stage

Endura®

Fungicide

- Apply Endura @ 30-50% bloom if:
 - Historic White Mold pressure
 - Wet weather, high humidity, heavy dew and/or cool temps
 - Excellent White Mold control desired

20 – 50% Bloom

Sharpen®

Powered by Kixor® Herbicide

- Apply Sharpen prior to harvest:
 - As a harvest aid application to aid in weed and crop desiccation
 - When seeds in middle pods of the seed head are tan to brown in color
 - Prior to sunny, warm conditions if possible

Prior to Harvest

InVigor®

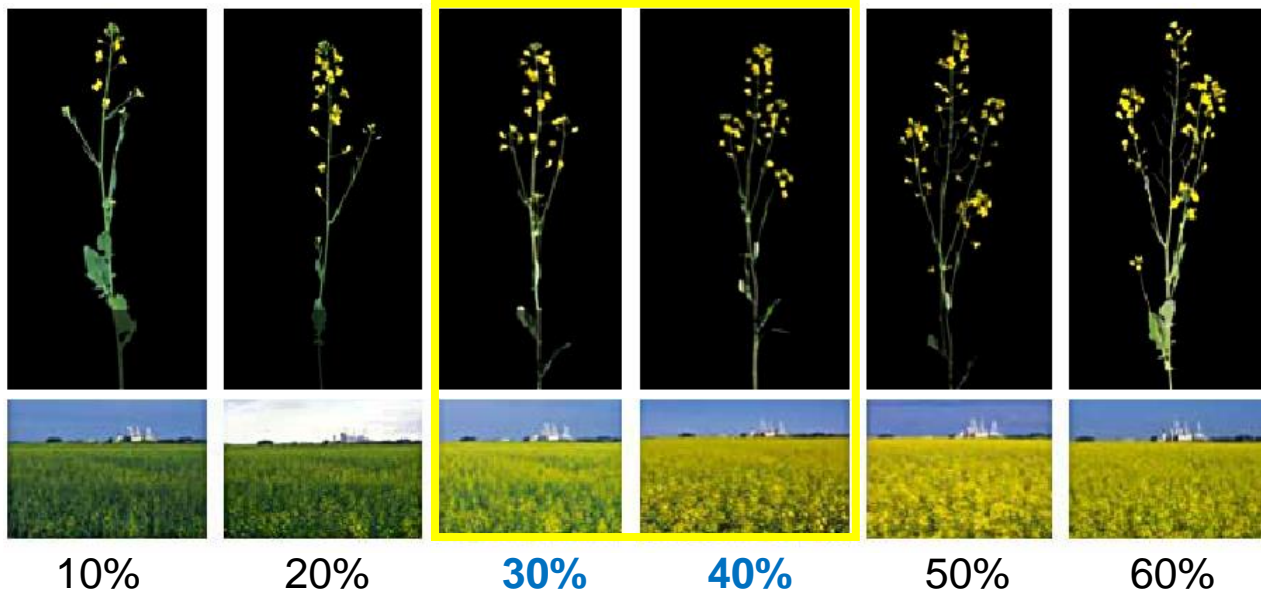


White Mold Control with Endura® Fungicide

Canola

Proper fungicide application timing:

- Proper application timing is critical to achieve the best results in controlling Sclerotinia. The ideal application timing of a Sclerotinia fungicide is **30% to 40%** flower, while applications up to 50% flower provide positive economic benefits.
- Optimum timing often corresponds to first sign of petal drop
- Goal is to protect as many flowers as possible





Endura[®]
Fungicide



Untreated

**5 oz per acre at
30% bloom**

Questions



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