

WE ARE FARMERS FIRST GENERATIONS STRONG

2 0 2 1 SEED GUIDE

THE THUNDER SEED

Farming is so much more than our livelihood or our way of life. It's our

legacy – the legacy of our parents and grandparents as well as the future legacy of our children and grandchildren. Our roots in this industry run deeper than the roots of any seed or plant you could grow. We wear the title of farmer with pride and contentment, just as our fathers did and their fathers before them.

Our dedication was both innate and learned through years of cultivating the soil and learning from our ancestors. To us, farming embodies the American dream and it's a bright future that we want to pass on to our sons and daughters. But it's not just nostalgia and daydreams, it's hard work, perseverance and dedication. And those are qualities we strive to pass on to the next generation of agriculturalists as well.

When our boots hit the ground each morning, we face the same challenges you do.

Our hands are calloused and scarred, as we work hard to find a better way to achieve higher yields and tackle the pests that target our crops. We will continue to find new solutions – we are up to the challenge. We know you hit the fields with the same grit and determination. That's why we're committed to being your solutions partner. We work hard and test our seeds so you can be confident knowing that the seeds you plant have the best traits for your farm. We'll continue to develop new varieties to ensure Thunder Seed meets the needs of future generations. This is seed you can count on for years to come.

It's also about having a partner you can count on. When you need seed, we're there to deliver within 24 hours if needed. We have multiple production and cleaning facilities as well as a vast dealer network, so no matter where you are, we're right there for you. Our success is in large part because of you, the hard-working, dependable farmers who put in long hours to make sure the work gets done right. You've placed your trust in us and we will never take that trust for granted.

Thank you for making Thunder Seed FIRST in the FIELD.



806 Center Avenue West, Dilworth, MN 56529 1-888-6THUNDER thunderseed.com



2021 SEED GUIDE HIGH-YIELDING, TECHNOLOGY DRIVEN SEED

VT Double PRO® RIB Complete® Corn Blend

Get superior protection from above-ground insects in a single-bag refuge solution. VT Double PRO® RIB Complete® Corn Blend is the first double-stacked trait with dual modes of action. It provides outstanding protection against above-ground pests with even greater protection for corn earworms. And with a blend of 95 percent traited seed and just 5 percent refuge, the lowest in the industry, you'll get higher yields. Targets: Corn Earworm, Fall Armyworms, Southwestern Corn Borer, European Corn Borer



Roundup Ready 2 Xtend® Soybeans

Find maximum disease and weed control, including glyphosate-resistant weeds, with Roundup Ready 2 Xtend® Soybean's groundbreaking seed technology. This soybean variety combines the high-yield potential of Roundup Ready 2 Yield® Soybeans with powerful glyphosate and dicamba tolerance, making it the industry's first biotech-stacked soybean seed. Get the best weed protection this season to experience high yields in your fields.



YIFI D

Roundup Ready[®] Corn 2 and Roundup Ready 2 Yield[®] Soybeans

Get the broadest protection against weeds and the flexibility to apply herbicides the way you need to for the best results on your farm. Our Roundup Ready[®] Corn 2 and Roundup Ready 2 Yield[®] Soybeans have a high tolerance to Roundup[®] herbicides for outstanding crop safety, saving you time you'd otherwise have to spend weeding. Spend less time spraying now and less time tilling next season.



ENLIST E3® Soybeans

Maximize your yield potential by combining crop tolerance and exceptional broadleaf weed control. Enlist E3[®] trait enables control against the toughest weeds in soybeans. With multiple herbicide tolerances, you have more weed control options in one complete, easy-to-use system. You get tolerance to 2,4-D choline and glyphosate, as well as additional glufosinate tolerance in Enlist E3[®] soybeans.



Agrisure Viptera® Corn

Agrisure Viptera® 3220 E-Z Refuge® features multiple modes of action for unsurpassed control of broad lepidopteran pests and corn borer.

OUR MISSION

To develop and deliver soybean and corn seed that gives growers the greatest potential for high yields and profits year after year, and to deliver unrivaled support before, during and after every growing season. THUNDER SEED

2021 SEED GUIDE - GRAIN CORN

GRAIN CORN

From conventional corn to varieties with additional protection, Thunder Seed's selection has the combination of traits needed for growing success in your fields. These top-performing hybrids have strong yields and are disease resistant, all under low moisture.



TECHNOLOGY









PRODUCT	TRAIT	MATURITY	FLOWERD	CHU'S TO BLACK LA	PLANT HE	EAR HEIGI	EAR TYPE	PLANTING	KERNEL R	SEEDLING	ROOT RAT	STALK RA	DROUGHT	GREENSN	STAYGREE	DRYDOWN	TEST WE	M S.SSOD	NCLB	STALK ANTHRAC	COMMON	SILAGE P(TOUGH CO	VARIABLE Condition	IDEAL COI	HERBICID SENSITIV	
TH6977 VT2P	VT2P	Π	med-early	2175	М	М	SD	MH	12-14	3.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.5	2.0	3.0	N/A	4.0	۱	1	2	ok	
TH7578 VT2P	VT2P	78	med-early	2225	MT	MH	SF	MH	14-16	2.0	1.0	2.0	2.0	3.0	1.0	2.0	3.0	3.0	2.0	N/A	2.0	2.0	2	2	2	ok	
TH6079 VT2P	VT2P	79	early	2250	Μ	М	SD	MH	14-16	2.0	2.0	2.0	2.5	2.5	2.0	3.5	2.5	3.0	2.5	3.0	N/A	4.0	2	1	1	ok	

TECHNOLOGY









- Elite hybrid with excellent yields and drought stress tolerance
- Quick start in spring with great emergence and vigor

Days

• Very good Goss's Wilt tolerance; good staygreen and drydown in fall

	PRODUCT	TRAIT	MATURITY	FLOWERING	CHU'S TO Black layer	PLANT HEIGHT	EAR HEIGHT	EAR TYPE	PLANTING RATE	KERNEL ROWS	SEEDLING VIGOR	ROOT RATING	STALK RATING	DROUGHT TOL.	GREENSNAP	STAYGREEN	DRYDOWN	TEST WEIGHT	LTIM S.SSOD	NCLB	STALK ANTHRACNOSE	COMIMON RUST	SILAGE POTENTIAL	TOUGH CONDITIONS	VARIABLE Conditions	IDEAL CONDITIONS	HERBICIDE Sensitivity
	TH6081 3220	3220	81	medium	2350	MT	MH	SF	M-MH	16-18	2.0	2.5	1.5	3.0	2.0	2.0	2.5	2.0	2.5	1.5	N/A	2.0	2.5	3	2	1	ok
	TH2081 CONV	conv	81	medium	2350	MT	MH	SF	M-MH	16-18	2.0	2.5	1.5	3.0	2.0	2.0	2.5	2.0	2.5	1.5	N/A	2.0	2.5	3	2	1	ok
NEW	TH6182 VT2P	VT2P	82	early	2400	MT	М	SF	M-MH	16-18	2.0	2.5	2.5	2.5	2.0	2.5	2.5	2.5	2.0	2.0	2.0	N/A	2.5	2	1	1	ok

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THUNDER 2021 SEED GUIDE - GRAIN CORN

Relative Maturity +

HYBR SEED CO

TH6982 VT2P BRAND

GRAIN CORN

GRAIN CORN

Flowering: early 🔻 CHU's Black Layer 2425

Excellent grain yields; combines great test weight and fast drydown

VTDoublepRO

VTDoublepR0

- Terrific disease package including good Goss's Wilt tolerance
- Plant on productive soils at higher population for best performance

NEW TH6185 VT2P BRAND

Flowering: medium 🔻 CHU's Black Layer 2550

- Strong yields; very stable in tough env with great drought tolerance
- Medium-tall plant with girthy ears, some flex, and good kernel depth
- Full 85 day hybrid so place in southern RRV & use caution based on maturity

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	PRODUCT	TRAIT	MATURITY	FLOWERING	CHU'S TO BLACK LAYER	PLANT HEIGHT	EAR HEIGHT	EAR TYPE	PLANTING RATE	KERNEL ROWS	SEEDLING VIGOR	ROOT RATING	STALK RATING	DROUGHT TOL.	GREENSNAP	STAYGREEN	DRYDOWN	TEST WEIGHT	LIIM S.SSOD	NCLB	STALK ANTHRACNOSE	COMMON RUST	SILAGE POTENTIAL	TOUGH CONDITIONS	VARIABLE CONDITIONS	IDEAL CONDITIONS	HERBICIDE Sensitivity
100	TH4072 RR	RR	72	medium	2025	Μ	Μ	SD	MH-H	14-16	2.0	2.0	2.5	2.5	2.5	2.5	2.0	2.0	2.5	3.5	2.5	N/A	4.0	3	2	2	ok
	TH6875 VT2P	VT2P	75	late	2100	MT	М	SD	MH	14-16	2.0	3.0	2.0	3.0	3.0	1.0	1.0	2.0	3.5	3.0	N/A	N/A	2.0	3	2	1	C (grp2)
	TH7677 VT2P	VT2P	77	med-late	2175	М	М	SD	MH	14-16	2.0	2.0	3.0	3.0	3.0	1.0	3.0	3.0	4.0	2.0	N/A	2.0	3.0	3	2	2	ok
1	TH6977 VT2P	VT2P	77	med-early	2175	Μ	Μ	SD	MH	12-14	3.0	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.5	2.0	3.0	N/A	4.0	1	1	2	ok
	TH7578 VT2P	VT2P	78	med-early	2225	MT	MH	SF	MH	14-16	2.0	1.0	2.0	2.0	3.0	1.0	2.0	3.0	3.0	2.0	N/A	2.0	2.0	2	2	2	ok
	TH6079 VT2P	VT2P	79	early	2250	М	Μ	SD	MH	14-16	2.0	2.0	2.0	2.5	2.5	2.0	3.5	2.5	3.0	2.5	3.0	N/A	4.0	2	1	1	ok
	TH6081 3220	3220	81	medium	2350	MT	MH	SF	M-MH	16-18	2.0	2.5	1.5	3.0	2.0	2.0	2.5	2.0	2.5	1.5	N/A	2.0	2.5	3	2	1	ok
	TH2081 CONV	conv	81	medium	2350	MT	MH	SF	M-MH	16-18	2.0	2.5	1.5	3.0	2.0	2.0	2.5	2.0	2.5	1.5	N/A	2.0	2.5	3	2	1	ok
NEW	TH6182 VT2P	VT2P	82	early	2400	MT	Μ	SF	M-MH	16-18	2.0	2.5	2.5	2.5	2.0	2.5	2.5	2.5	2.0	2.0	2.0	N/A	2.5	2	1	1	ok
	TH6982 VT2P	VT2P	82	early	2425	М	ML	SD	MH-H	14-16	3.0	1.0	2.0	3.0	1.0	4.0	1.0	1.0	3.0	2.0	N/A	3.0	4.0	3	2	1	ok
NEW	TH6185 VT2P	VT2P	85	medium	2550	MT	MH	SF	M-MH	18-20	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.5	2.5	3.0	N/A	N/A	1	1	2	ok

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If you only see one... It's already too late.

Protect your crop with Agrisure Viptera® – the only trait that provides effective control of western bean cutworm. It also protects the crop from key insects like corn earworm, cutworm and armyworm, for the most comprehensive above-ground insect control available.

Discover why Agrisure Viptera is worth a closer look at **Syngenta.ca/Agrisure-Viptera.**

AgrisureViptera®

syngenta.

Always read and follow label directions. Agrisure Viptera®, the Alliance Frame, the Purpose Icon and the Syngenta logo are trademarks of a Syngenta Group Company. © 2020 Syngenta.

Rati	ng	Plant	Height	Ear He	ight	Ear Ty	ре	Planti	ng Rate	Herbicid	e Sensitivity	Growing Cor	nditions
1	Excellent	S	Short	Leg	Low	D	Determinate	ML	Medium Low	C	Caution	Tough	low yield env (below 140 bu/ac)
2	Very Good	MS	Medium Short	ML	Medium Low	SD	Semi-Determinate	М	Medium	W	Warning (do not use)	Variable	moderate yield env (140-180 bu/ac)
3	Good	М	Medium	М	Medium	SF	Semi-Flex	MH	Medium High	grp4	Group 4: growth regulator	Ideal	high yield env (above 180 bu/ac)
4	Below Average	MT	Medium Tall	MH	Medium High	F	Flex	H	High	grp2	Group 2: SU/ALS inhibitor		
5	Poor	T	Tall	Η	High					grp27	Group 27: HPPD inhibitor		

RR - Roundup Ready® Corn 2 | VT2PRIB - VT Double PR0® RIB Complete® Corn Blend | CONV - Conventional Thunder Seed Variety



2021 SEED GUIDE - SILAGE CORN

SILAGE CORN

We recognize that many of the characteristics desired in a silage corn are different than the characteristics desired in a grain corn. Ultimately, a silage hybrid must produce a robust, reliable, digestible crop that will yield lots of tonnage with high quality and high energy content. Thunder Seed can provide all of this to you through our silage products.



CANADIAN SILAGE CORN

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TECHNOLOGY







CANADIAN SILAGE CORN

thunderseed.com



	PRODUCT	TRAIT	MATURIT	FLOWER	CHU'S TO BLACK L	PLANT H	EAR HEIG	EAR TYP	PLANTIN	KERNEL I	SEEDLING	ROOT RAY	STALK R	DROUGHT	GREENSN	STAYGRE	DRYDOW	TEST WI	A S.SSOD	NCLB	COMMON	SILAGE P	TOUGH C	VARIABL	IDEAL CO	HERBICID
18	TH4126 RR	RR	79	medium	2250	MT	М	SF	MH	12-16	2.0	2.0	2.0	3.0	2.0	2.0	4.0	2.0	N/A	N/A	N/A	2.0	2	2	2	ok
	TH4126 CONV	conv	79	medium	2250	MT	М	SF	MH	12-16	2.0	2.0	2.0	3.0	2.0	2.0	4.0	2.0	N/A	N/A	N/A	2.0	2	2	2	ok
NEW	TH6180 VT2P	VT2P	80	medium	2300	Т	М	SF	MH	14-16	2.0	2.0	2.0	2.5	2.0	2.0	4.0	2.0	N/A	N/A	N/A	2.0	2	2	2	ok

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CANADIAN SILAGE CORN

TECHNOLOGY







	PRODUCT	TRAIT	MATURITY	FLOWERING	CHU'S TO BLACK LAYER	PLANT HEIGHT	EAR HEIGHT	EAR TYPE	PLANTING RATE	KERNEL ROWS	SEEDLING VIGOR	ROOT RATING	STALK RATING	DROUGHT TOL.	GREENSNAP	STAYGREEN	DRYDOWN	TEST WEIGHT	LTIM S.SSOD	NCLB	COMMON RUST	SILAGE POTENTIAL	TOUGH CONDITIONS	VARIABLE CONDITI	IDEAL CONDITIONS	HERBICIDE SENSITI	
	TH7681 VT2P	VT2P	81	medium	2375	T	MH	SD	MH-H	14-16	2.0	3.0	2.0	3.0	N/A	1.0	2.0	2.0	4.0	N/A	N/A	2.5	3	2	1	ok	
NEW	TH6183 VT2P	VT2P	83	medium	2450	T	MH	SF	M-MH	14-16	2.0	2.0	3.0	2.5	2.5	2.0	3.5	3.0	3.0	2.0	N/A	1.5	2	1	1	ok	
	TH4188 RR	RR	88	med-late	2675	MT	М	SF	М	12-14	2.0	3.0	2.0	2.5	N/A	3.0	2.5	2.0	3.5	N/A	N/A	2.0	2	2	2	ok	

CANADIAN SILAGE CORN

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Think Before You Bin-Run

Verification Required The last patent on the original Roundup Ready[®] soybean trait expired a few years ago and U.S. farmers may legally plant saved seed from some varieties of soybean containing the Roundup Ready[®] soybean trait. However, it is important that you check with your seed supplier to determine if a specific Roundup Ready[®] soybean variety is covered by other intellectual property rights, and if so, the policy for saving seed of that variety.

Higher Seeding Rate A higher seeding rate may be required for bin-run Roundup Ready[®] soybeans compared to new branded seed.

Yield Loss Roundup Ready 2 Yield[®] soybean varieties and Roundup Ready 2 Xtend[®] soybean varieties typically have a higher yield opportunity than Roundup Ready[®] soybean varieties^{*}.

Cleanout Loss Loss of seed and/or shrink occurs during the seed cleaning and handling processes for bin-run seed.

Seed Treatment Costs Treating your seed will add costs – both the cost of the treatment and the application of that treatment.

Lost Income Every bushel of saved seed you plant is a bushel you're not selling as commodity grain.

Increased Seed Management If you plan to save and bin-run Roundup Ready[®] soybeans for planting, you will have to manage your harvest operations and grain storage so that the seed isn't co-mingled with other seed that's covered by intellectual property rights.

High Value of New Branded Seed

Latest Technology

- High-yielding soybean technologies
- · Better variety options
- Leading seed treatment options

Customer Service

- Dealer agronomic support before and after the sale
- Replant policy support
- Convenient packaging and delivery

Reliable Germination and Quality

- Rigorously tested and meets U.S. Federal Seed Act requirements
- Free of seed-borne diseases
- Properly stored and conditioned



Bayer receives call and letters each year about potential seed compliance matters. Anyone with a concern or question can anonymously call 1-888-283-6847.

*Roundup Ready 2 Yield® soybeans and Roundup Ready 2 Xtend® soybeans are covered by di erent patents than original Roundup Ready® soybeans and cannot be saved and planted.

Monsanto Company is a member of Excellence Through Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. These products have been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from these products can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for these products. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready 2 Xtend® soybeans contains genes that confer tolerance to glyphosate and dicamba. Glyphosate will kill crops that are not tolerant to dicamba. Contact your local crop protection dealer or call the technical support line at 1-888-283-6847 recommended Roundup Ready® Xtend Crop System weed control programs. Roundup Ready 2 Xtend® and Roundup Ready® are registered trademarks of Bayer Group.

YOUR FIELD. YOUR CHOICE.

Our corn traits are built with farmers in mind and proven in the fields.

That's why there's no better choice than SmartStax[®] RIB Complete[®] corn for acres with above and below ground insect pressure, and VT Double PRO[®] RIB Complete[®] corn for acres with above ground pressure. **Our corn traits deliver:**

		VTDoublepro RIB COMPLETE
REFUGE COMPLIANCE	100%	100%
ABOVE-GROUND PROTECTION	🗸 broadest spectrum	\checkmark
BELOW-GROUND PROTECTION	✓ broadest spectrum	
REFUGE	5% in the bag	5% in the bag
HERBICIDE TOLERANCE	Roundup Ready [®] 2 Technology + LibertyLink [®]	Roundup Ready [®] 2 Technology
Learn more	at Traits.bayer.ca	



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2021 SEED GUIDE - SOYBEAN

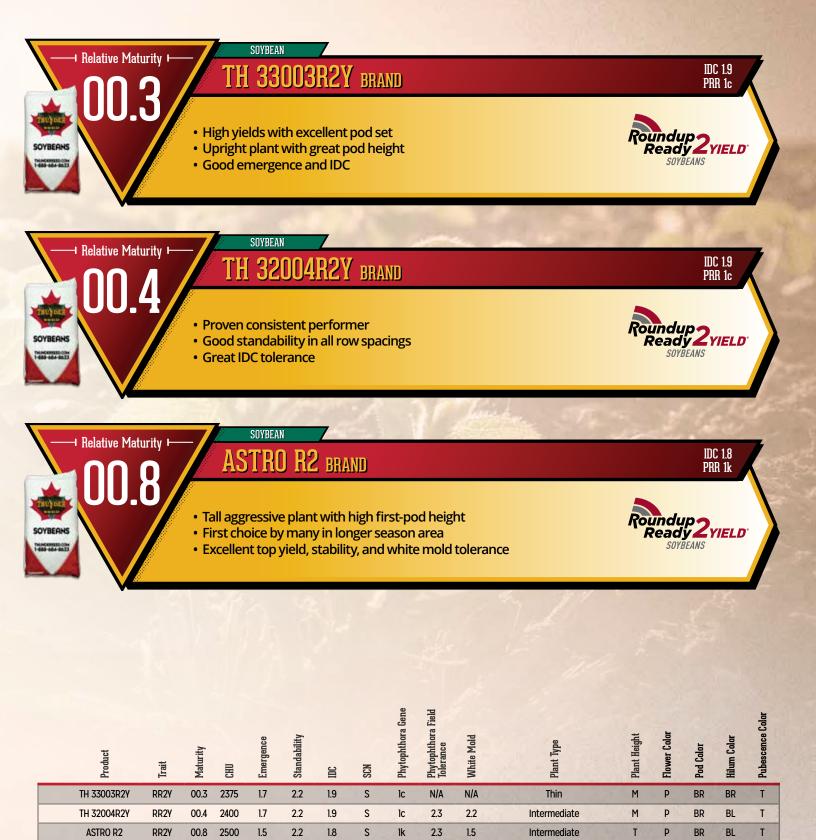
SOYBEANS

The large selection of soybeans means that we are able to accommodate your soil's needs and provide disease and pest protection for maximum yields. Our lineup includes Roundup Ready 2 Yield, Roundup Ready 2 Xtend, and Enlist E3 providing high level of tolerance a broad range of herbicides able to address any weed problems you may have in your fields.











1-888-6THUNDER

TECHNOLOGY





2021 SEED GUIDE - SOYBEAN



THUNDER

TH71001E BRAND

SOYBEAN

Super early Enlist E3 soybean provides new tool for controlling volunteer canola
Medium plant height and intermediate plant type is a good fit for narrow rows

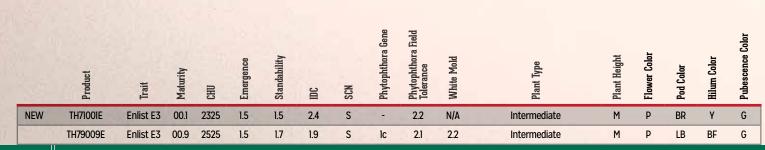
Target medium textured soils and high population for best performance



TH79009E BRAND

SOYBEAN

- Strong performance west to east across region
- Good plant type across varying conditions
- Great standability and IDC tolerance



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CANADIAN SOYBEAN

IDC 2.4

Enlist E3

IDC 1.9 PRR 1c

Enlist E3

SOYBEANS

SOYBEANS



2021 SEED GUIDE - SOYBEANS AGRONOMIC INFORMATION GUIDE

	Product	Trait	Maturity	CHU	Emergence	Standability	ĴĒ	SCN	Phytophthora Gene	Phytophthora Field Tolerance	White Mold	Plant Type	Plant Height	Flower Color	Pod Color	Hilum Color	Pubescence Color
	TH 33003R2Y	RR2Y	00.3	2375	1.7	2.2	1.9	S	lc	N/A	N/A	Thin	М	Р	BR	BR	Т
	TH 32004R2Y	RR2Y	00.4	2400	1.7	2.2	1.9	S	lc	2.3	2.2	Intermediate	М	Р	BR	BL	Т
	ASTRO R2	RR2Y	00.8	2500	1.5	2.2	1.8	S	lk	2.3	1.5	Intermediate	Т	Р	BR	BL	Т
	TH 87003 R2X	Xtend	00.3	2375	1.5	2.2	1.7	R	lc	1.9	2.2	Intermediate	Т	Р	BR	BL	Т
	TH89004 R2X	Xtend	00.4	2400	1.7	2.2	1.7	S	1c	1.7	2.2	Thin/Intermediate	MT	Р	BR	BR	Т
	TH 88005R2XN	Xtend	00.5	2425	1.6	2.0	1.8	R	lc	1.8	2.0	Intermediate	T	Р	LB	BL	T
NEW	TH81007 R2XN	Xtend	00.7	2475	1.5	2.0	1.8	R	Het 1c	1.3	2.0	Intermediate/Bushy	MT	Ρ	BR	BR	Т
	TH 88007R2X	Xtend	00.7	2475	1.5	2.3	2.0	S	lc	1.9	2.5	Intermediate/Bushy	М	Р	BR	BL	Т
	TH89009 R2XN	Xtend	00.9	2525	1.7	2.0	1.5	R	۱k	1.4	2.2	Intermediate/Bushy	MT	Р	BR	BL	Т
NEW	TH71001E	Enlist E3	00.1	2325	1.5	1.5	2.4	S	-	2.2	N/A	Intermediate	М	Р	BR	γ	G
	TH79009E	Enlist E3	00.9	2525	1.5	1.7	1.9	S	lc	2.1	2.2	Intermediate	М	Р	LB	BF	G

RR2Y - Roundup Ready 2 Yield® Soybeans | Xtend - Roundup Ready 2 Xtend® Soybeans | Enlist E3 - Enlist E3® Soybeans RATING: 1 | EXCELLENT 2 | VERY GOOD 3 | GOOD 4 | BELOW AVERAGE 5 | POOR PLANT HEIGHT: S | SHORT MS | MEDIUM SHORT M | MEDIUM MT | MEDIUM TALL T | TALL

QUICK REFERENCE GUIDE

1. Field Selection/Crop Rotation

- a. No restrictions
- b. Avoid high-trash cover field (i.e., winter wheat)

2. Herbicide Residual Problems

- a. Mostly Lontrel types
- b. Minor problems with muster
- 3. Variety
 - a. Earlier type and very light sensitive b. Strong germinator with good vigor

4. Inoculants

- a. 30-day liquid on seed
- b. 5-8 pounds/acre granular inoculant c. Use higher rates on virgin or cooler,
- minimum-tillage soils

5. Seed Treatments a. Only CruiserMaxx® Vibrance®

6. Fertility

a. No nitrogen at all b. 0-40 pounds of phosphate depending on seed placement c. 0-60 pounds of potash broadcast (usually none is required)

7. Seeding Date

- a. Ideal: May 10-May 25
- b. Possible: May 1-June 10 c. Seed when soils are warming up
- 8. Seeding Rate a. Solid seeding 200,000-220,000
 - seeds/acre
 - b. Row crop 170,000-190,000 seeds/acre

9. Herbicide Program

- Roundup®: a. Higher rates if needed
 - b. Any time up to flowering
- Volunteer Canola: c. Cut rate of Pursuit®
- d. Pre-emerge burn off e. Reflex®
- f. Valtera™
- g. Basagran® h. Viper

10. Insects

a. Soybean Aphids: Until recently only an occasional problem in Red River Valley, easy to kill and rarely a problem in the west

b. Spider Mites: Very rare in the valley

11. Disease

- a. Root Born: most varieties have reasonable tolerance - CruiserMaxx[®] Vibrance[®] Fungicide seed treatment and crop rotation help
- b. Foliar Diseases: Most disease results in minor yield losses
- Sclerotinia can cause moderate reduction in yield
- New seed treatment, crop rotation, crop spacing and lighter seeding rates can help combat the problem

12. Harvest

- a. Best method is straight combining with a flex header
- b. Swathing
- c. No need to desiccate
- d. Dry is 13-13.5 percent moisture



a. Keeps well, especially if sample is clean

b. Tough beans dry down easily with aeration

14. Marketing

- a. Easy and flexible in the Red River Valley b. Getting a lot better outside the
- **Red River Valley** c. Main line grain elevators, smaller
- grain
- brokers and small processors
- d. Hedging up to three years

15. Grading

- a. Very easy b. Much lower chance of downgrades
- c. Cracked beans are usually not
- dockage
- d. Lower dockage

16. Revenue/Cost

- a. Lower cost/acre than Canola b. Revenue depends more on moisture
- for the area c. Yield:
- Dry conditions 20-25 bushels/acre - Moist conditions 30-55 bushels/ acre



- ZONE ADAPTATION Relative Maturity 000.5 - 00.3 RM Relative Maturity Relative Maturity 00.3 - 00.5 RM MANITOBA ALBERTA SASKATCHEWAN Winnipeg Regina

THE SOYBEAN SYSTEM YOU CAN'T RESIST

The Roundup Ready[®] Xtend crop system combines the high yield potential of Roundup Ready 2 Xtend[®] soybeans with built-in tolerance to both glyphosate and dicamba chemistries.

Applying the higher rate Roundup Xtend[®] in your first pass provides short-term residual activity on small seeded broadleaves* with the added ability to effectively manage resistance concerns.

EARLY SEASON CONTROL TO GET AHEAD of the weeds and stay there.

traits.bayer.ca »

*Performance may vary from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready 2 Xtend* soybeans contains genes that confer tolerance to glyphosate and dicamba. Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Contact your local crop protection dealer or call the technical support line at 1-800-667-4944 for recommended Roundup Ready* Xtend*, Roundup Ready*, Roundup Xtend* and VaporGiny* are registered trademarks of Bayer Group. Used under license. @2020 Bayer Group. All rights reserved.







Glyphosate Pre-mix





The Enlist[™] weed control system will change how you think about weed management in soybeans.

Farmers can NOW purchase Enlist E3[™] varieties for Western Canada and take control of resistant and hard-to-control weeds.

Introducing the Enlist weed control system

The Enlist weed control system will help growers meet the challenge of farming today and in the future.

Why use the Enlist weed control system?

- A new system built for Canadian farmers starting with new traits providing herbicide tolerance in soybeans and corn
- Herbicide solutions built on 2,4-D Choline, an improved form of 2,4-D with new Colex-D[™] technology
- Includes a stewardship initiative that supports the use of multiple modes of action to address resistant weeds, provides training, and promotes responsible and sustainable use

Enlist E3[™] Soybeans

Enlist E3 soybeans provide elite, soybean genetics with high yield potential and industry leading multi-mode of action herbicide tolerance.

Why use Enlist E3 soybeans?

- Enlist E3 soybeans are tolerant to 2,4-D, glyphosate and glufosinate herbicides
- Crop tolerance to Enlist herbicides with Colex-D technology is robust, enabling applications up to the R2 growth stage
- With tolerance to 3 different herbicide modes of action, Enlist E3 soybeans are part of a strong resistance management strategy
- A program approach including other herbicide modes of action and residual herbicides provides an even more sustainable approach to weed management

Enlist Duo[™] herbicides with Colex-D technology

The Enlist weed control system gives you the choice of Enlist herbicides with Colex-D technology.

Enlist Duo[™]



Convenience of both 2,4-D choline and glyphosate in one formulation - controls more than 90 weeds including grasses and many hard-to-control and resistant weeds.

New Enlist[™] 1



New Enlist 1 is a stand-alone Colex-D formulation that controls over 40 broadleaf weeds. It gives you the flexibility to tank-mix with and adjust rates of glyphosate or glufosinate to control a wide range of hard to control and resistant weeds.

C	:OL	EX•D [™] t	echno	log	У
		WHAT GO	ES INTO IT		
2,4-D cholin with Colex-[Technology)	Lat formu scie		m	Proprietary anufacturing process
		WHAT IT	DELIVERS		
Near zero volatility	p	nimized otential physical drift	Low odour		Improved handling characteristics

Application Requirements



NOZZLES

Use nozzles and operating pressures that produce extremely coarse to ultra-coarse droplets to minimize drift



BOOM HEIGHT

Maintain boom height 50 cm above crop canopy to reduce the risk of drift



WEED HEIGHT Spray weeds less than 10 cm tall



WIND SPEED

Optimal wind speeds for application typically occur between 5 and 15 km/h

LABEL BUFFER Maintain the required label buffer to protect sensitive areas

GROUND SPEEDS

is less than 25 km/h

Make sure ground speed



WATER VOLUME

Minimum carrier volume is 10 GPA (15 GPA is recommended when using a DRA)



AMMONIUM SULFATE

Ammonium sulfate and ammonium-based additives are restricted in applications



TRIPLE RINSE Use triple rinse tank clean-out procedure



conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields. Roundup Ready 2 Xtend® soybeans contain genes that confer tolerance to glyphosate and dicamba. Agricultural herbicides containing glyphosate will kill crops that are not tolerant to glyphosate, and those containing dicamba will kill crops that are not tolerant to glyphosate will kill crops that are not tolerant to glyphosate, and those containing dicamba will kill crops that are not tolerant to dicamba. Contact your Bayer dealer or call the Bayer technical support line at 1-800-667-4944 for recommended Roundup Ready[®] Xtend Crop System weed control programs. Tank mixtures: The applicable labeling for each product must be in the possession of the user at the time of applicable. Joll Aged Cromulations for compatibility or performance other than specifically listed by brand name. Always predetermine the compatibility of tank mixtures by mixing small proportional quantities in advance. Bayer, Roundup Ready 2Xtend[®] and Roundup Ready[®] are registered trademarks of Bayer Group, Monsanto Canada ULC licensee. @2020 Bayer Group, All rights reserved.

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STAY INFORMED WHILF YOU

Text THUNDERSEED to 25827 to join our text club to stay up to date on current information!

From our website to social media pages, we offer several resources for you to stay connected with us. Through these channels, you'll have the agronomic insight you need on new seed varieties, treatments and techniques to maximize yield potential.

Be sure to join us around the cyber tailgate! Stay connected with us on Facebook, Twitter and Instagram and check out our videos on YouTube. You can easily access any of our social media sites through our website, thunderseed.com.

WE'RE FARMERS

ADAMS FARMS

The Adams family's agricultural roots run deep in Minnesota, where the family's youngest generation continues to farm in Wendell. It's a passion that led them into agribusiness in the 1950s as Adams Seed – a legacy that continues today as part of Thunder Seed.

PETERMANN FARMS

The Petermann family lives and farms in Hawley, Minnesota, where their strong passion for agriculture continues from generation to generation. In 1960, they formed Petermann Seeds Inc. to share their success with others.



TOBOLT FARMS

Farming is way of life for the Tobolt family, who live and farm in Moorhead, Minnesota. Tobolt Seed, an 80-year-old family-owned business, continues helping farmers today as part of Thunder Seed.



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Seeds containing the Enlist, Herculex and PowerCore traits are protected under numerous US patents. Seeds containing patented traits can only be used to plant a single commercial crop and cannot be saved or replanted. You acknowledge and agree to be bound by the terms and conditions of the following documents in effect at the time of planting of this seed: (i) the Technology Use Agreement and (ii) the Product Use Guides for all technologies in this seed, including the Herbicide Resistance Management (HRM), and Use requirements detailed therein (www.corteva.us/Resources/trait-stewardship.html).

To plant Enlist, Herculex and PowerCore seed, you must have a limited license from Dow AgroSciences LLC (or other appropriate affiliates). In consideration of the foregoing, Dow AgroSciences grants to the Grower the limited license to use its technology to produce only a single commercial crop in the United States under the terms and conditions set forth in the Technology Use Agreement in effect at the time of planting of this seed.

Always read and follow herbicide label directions prior to use: Enlist[™] products contain the Enlist trait that provides crop safety for use of labeled over-the-top applications of glyphosate, glufosinate and 2.4-D herbicides featuring Colex-D® technology when applied according to label directions. Following burndown, the only 2.4-D containing herbicide products that may be used with Enlist[™] crops are products that feature Colex-D technology and are expressly labeled for use on Enlist crops. 2.4-D products that do not contain Colex-D technology are not authorized for use in conjunction with Enlist products.

Enlist E3^{III} soybeans contain the Enlist E3 trait that provides crop safety for use of labeled over-the-top applications of glyphosate, glufosinate and 2,4-D herbicides featuring Colex-D® technology when applied according to label directions. Following burndown, the only 2,4-D containing herbicide products that may be used with Enlist^{IIII} crops are products that feature Colex-D technology and are expressly labeled for use on Enlist crops. 2,4-D products that do not contain Colex-D technology are not authorized for use in conjunction with Enlist E3 soybeans. WARNING: Enlist E3 soybeans are tolerant of over-the top applications of glyphosate, glufosinate, and 2,4-D. Accidental application of incompatible herbicides to this variety could result in total crop loss. When using 2,4-D herbicides, grower agrees to only use 2,4-D products that contain Colex-D technology authorized for use in conjunction with Enlist E3 soybeans. Always read and follow herbicide label directions prior to use.

PLEASE READ CAREFULLY. By opening this bag or planting this seed. you acknowledge and agree to the following terms, personally and on behalf of the individual or entity that purchased this seed ("Grower"), to be bound by the terms and conditions of the following documents in effect at the time of planting of this seed: (i) the Technology Use Agreement and (ii) the Product Use Guides for all technologies in this seed, including the Herbicide Resistance Management (HRM), and Use requirements detailed therein (www.corteva.ca/en/trait-stewardship.htm)).

To plant this seed, you must have a limited license from Corteva Agriscience (or other appropriate affiliates). No license or sublicense is conveyed to use these seeds solely by the purchase/bailment/transfer of such seeds. In consideration of the foregoing. Dow AgroSciences grants to the Grower the limited license to use its technology to produce only a single commercial crop in Canada under the terms and conditions set forth in the Technology Use Agreement in effect at the time of planting of this seed. Herbicides – When using 2.4-D herbicides, grower agrees to only use 2.4-D products that contain Colex-D® technology authorized for use in conjunction with Enlist E3^m solveans.

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These seeds are covered under Dow AgroSciences and M.S. Technologies, L.L.C. Patent Rights which can be found at: www.corteva.us/Resources/trait-stewardship.html. The purchase of these seeds conveys no license under said patents to use these seeds.

The transgenic soybean event in the Enlist E3TM soybean is protected under Dow AgroSciences and M.S. Technologies, LLC. Patent Rights which can be found at: www.corteva.ca/en/trait-stewardship.html. The purchase of these seeds conveys no license under said patents to use these seeds. For more information, contact your authorized retailer or Corteva Agriscience at 1-800-667-3852 or visit www.corteva.ca/en/trait-stewardship.html. The purchase of these seeds conveys no license under said patents to use these seeds. For more information, contact your authorized retailer or Corteva Agriscience at 1-800-667-3852 or visit www.corteva.ca/en/trait-stewardship.html. The transgenic soybean event in the Enlist E3TM soybean was jointly developed and owned by Dow AgroSciences LLC. Ad M.S. Technologies, LLC. @TM Enlist E3, the Enlist E3 (sog, and Colex-D are trademarks of The Dow Chemical Company ("Dow") or an affiliated company of Dow. Excellence Through Stewardship.

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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready© 2 Technology contains genes that confer tolerance to glyphosate. Roundup Ready 2 Xtend© soybeans contains genes that confer tolerance to glyphosate and dicamba. Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to glyphosate. Bit are not tolerant to glyphosate and Decign[™], Roundup Ready 2 Xtend©, Roundup Ready 2 Vield©, Roundup







Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, **including applicable refuge requirements for insect resistance management**, for the biotechnology traits expressed in the seed as set forth in the Monsanto Technology Stewardship Agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.

THANK JOU FOR CHOOSING THUNDER SEED

*First year results of 2-year protocol study with independent cooperators across 8 locations examining the yield differences of saved Roundup Ready[®] soybeans versus newly purchased Roundup Ready 2 Yield[®] soybeans.

When you buy new seed from Thunder Seed, you will enjoy some limited warranty benefits. With Thunder Seed, you receive agronomic support and can participate in the Roundup Rewards program, which has paid out more than \$600 million to growers since 1997.

Thunder Seed is committed to our customers' successes through linking today's producer with tomorrow's technology. Thunder Seed researches the newest traits and highest yielding germplasm to pick the right genetic packages that will work for your soil. New trait introductions take 7-9 years for commercialization and cost \$50-\$100 million. You have the assurance that Thunder Seed and Monsanto are 100% committed to our customers success. Input costs for the Roundup Ready[®] System – seed plus chemicals – have decreased over the past six years while other input costs rose.



WARRANTY: Thunder Seed of Dilworth, MN, and Dealer warrants to the purchase that the seeds described on the tag are sold within recognized tolerances. Thunder Seed of Dilworth, MN, gives no further warranties of the seed, express or implied, of merchantability or fitness for any particular purpose, nor any other warranty

against loss of yield or for any other reason or cause, including environmental conditions. The parties agree the buyer's sole and exclusive remedy against Thunder Seed of Dilworth, MN, is the purchase price of the seed, and that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, loss of sales, injury to person or property, or any other incidental or consequential loss) shall be available to the purchaser. The parties further agree that purchaser may return seed within fifteen (15) days after purchase for a refund of purchase of the price and, unless this seed is returned within fifteen (15) days, that purchaser accepts these terms.

Thunder Seed Company, Inc. is a quality seed company that is backed by many years of experience through its owner-operators.

Thunder Seed is committed to meeting the changing needs of today's farmers. By monitoring the latest technologies then incorporating that knowledge into high-yielding seed products. Thunder Seed is linking today's producer with tomorrow's technology.

Look to Thunder Seed's product line-up for high-yielding corn, trial-winning Roundup Ready[®] soybeans and conventional soybeans.

Roundup Ready soybeans are simply the most profitable and convenient way to grow soybeans. You can spray Roundup agricultural herbicides in-crop for emergence through flowering for unsurpassed weed control, proven crop safety and maximum yield potential. Thunder Seed puts their experience and reputation behind the quality and integrity of every unit they sell.

Thunder Seed recommends the purchase of new seed for a variety of benefits compared to bin run seed. Input costs are higher for planting bin run versus new certified seed. That cost includes higher seeding rate and loss of seed or shrinking that occurs when cleaning bin-run seed. Thunder Seed offers reliable seed supply in many maturities with a set standard of high-quality and high-potential product that has shown to out-yield much higher than in-bin seeds by 6 bushels or more per acre.*

REST in the RIBLD

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