

Test by: North Iowa F.I.R.S.T., Inc. Sanborn, IA

2021 Soybeans Top 30 Harvest Report

Iowa North Central [IANC] WATERLOO, IA
Rottinghaus Farms, Rottinghaus Farms, Black Hawk County,
IA 50703

Early-Season Test	2.1 - 2.5 Day CRM S2021IANC04a
Top 30 of 48	For Gross Income (Sorted by Yield) Average of (3) Replications
PREV. CROP/HERB:	Corn, Rye Cover Crop / Harness Max, Triple Flex, Atrazine, Roundup
SOIL DESCRIPTION:	Marquis loam, well drained, non- irrigated
SOIL CONDITION:	very high P, very high K, 5.8 pH, 2.5% OM, 14.0 CEC
TILLAGE/CULTIVATION:	No-Till
PEST MANAGEMENT:	Zidua Pro, Warrant Ultra, Section Three, Cornerstone 5
FERTILITY - Applied N:	16 Spring
Applied N-P-K (units):	16-104-0
SEEDED - RATE - ROW:	May 12 144.0 /A 30" spacing
HARVESTED - STAND:	Oct 16 125.8 /A

TEST COMMENTS:

Rainfall was spread out fairly consistently throughout the season but the measured amounts were small and the duration between showers was lengthy...sometimes weeks would pass without any precipitation. June was 4" below the 10-yr average and was followed by the hot and dry weeks of July that was only interrupted once by a good soaker on July 15 that provided nearly 2". The system that covered the rest of northern Iowa from Aug 21 - Sept 3 provided 6.1" to this Rottinghaus farm. And while the late rain was very welcome and helped fill top pods, some yield damage had already occurred from drought conditions that lingered earlier in the year.

Company/Brand	Product/Brand	Technol.†	RM	SCN Resist.	Yield Bu/A ↓	Moisture %	Lodging %	Stand (x 1000)	Gross Income \$/Acre	Rank
Zinesto	Z2401E ↗	E3	2.4	R	71.2	14.0	25	136.7	889	1
Loyal	L2530E ↗	E3	2.5	R	68.7	14.1	22	121.7	857	2
FS HiSOY	25E00 ↗	E3	2.5	R	68.2	14.1	8	135.3	851	3
Xitavo	XO 2501E ↗	E3	2.5	R	66.8	14.0	0	126.0	834	4
NuTech	22N02E ↗	E3	2.2	R	66.8	14.1	8	125.0	833	5
Latham	L 2549 R2X ↗	RRX	2.5	R	65.9	14.2	0	125.3	822	6
NK Brand	NK21-H4XF ↗	RXF	2.1	MR	65.6	14.3	65	125.3	818	7
Renk	RS248NX ↗	RRX	2.4	R	65.4	14.2	16	130.0	816	8
Pioneer	P25A54X GC ↗	RRX	2.5	R	64.9	14.1	0	133.0	810	9
Golden Harvest	GH2102XF § ↗	RXF	2.1	MR	64.9	14.2	70	125.3	810	10
Hoegemeyer	2240 E ↗	E3	2.2	R	64.7	14.3	0	130.0	807	11
Hefty	H24XF2 ↗	RXF	2.4	NA	64.4	14.4	5	123.0	803	12
Credenz	CZ 2121GTLL ↗	LLGT27	2.1	MR	63.8	14.3	0	128.3	796	13
Genesis	G2550E ↗	E3	2.5	R	63.4	14.1	5	125.7	791	14
Renk	RS242NXF ↗	RXF	2.4	R	62.6	14.2	0	123.3	781	16
Kruger	K2294XF ↗	RXF	2.2	R	62.5	14.4	0	131.3	780	17
Xitavo	XO 2181E ↗	E3	2.1	R	62.4	13.9	0	120.7	779	18
Hefty	H25XF1 ↗	RXF	2.5	NA	62.1	14.5	43	131.7	774	19
NuTech	24N04E ↗	E3	2.4	R	61.8	14.0	12	123.3	771	20
Loyal	L2130E ↗	E3	2.1	R	61.8	14.2	3	129.3	771	21
Hoegemeyer	2421 E ↗	E3	2.4	R	61.7	14.1	0	122.0	770	22
Hoegemeyer	2141 E ↗	E3	2.1	R	61.6	14.2	20	125.3	769	23
Kruger	K2391XF ↗	RXF	2.3	R	61.6	14.3	0	129.3	768	24
Cornelius	CB24XF18 ↗	RXF	2.4	R	61.4	14.2	0	119.0	766	25
Hefty	H23XF1 ↗	RXF	2.3	NA	61.4	14.6	0	134.0	765	26
Pioneer	P21A28X § ↗	RRX	2.1	R	61.3	14.0	21	129.0	765	27
Cornelius	CB23XF63 ↗	RXF	2.3	R	61.3	14.3	25	120.7	765	28
Zinesto	Z2302SE ↗	E3,ST	2.3	NA	61.0	14.2	27	130.3	761	29
Genesis	G2260E ↗	E3	2.2	R	60.7	14.2	8	126.0	757	30
Stine	21EE62 § ↗	E3	2.1	R	60.6	14.3	21	121.0	756	31
Croplan	CP2400X CK	RRX	2.4	R	63.2	14.0	21	124.7	789	15
					Averages =	61.7	14.2	13	125.8	770
					LSD (0.10) =	3.7	0.2	19		
					LSD (0.25) =	1.9	0.1	10		
					C.V. =	5.6	Historic yield: 58.75 bu/a, 6 yr(s)			

Corey Rozenboom

Corey Rozenboom

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Yield & Income Factors:

Base Moisture = 13.0% Shrink = 1.3 Drying = \$0.02 Prices: GMO = \$12.50

Report Date: 10/17/2021

† See last page for abbreviation descriptions. Dark colored row identifies the check product found in early- and full-season tests. **Bold** yields are significantly above test average by LSD(0.10). **Italicized** brands exceed the grain moisture limit for this test. **ns** = column values not significantly different. ↗ New! Links to full product yield results at www.firstseedtests.com

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2021 Soybeans Top 30 Harvest Report

Iowa North Central [IANC] WATERLOO, IA
Rottinghaus Farms, Rottinghaus Farms, Black Hawk County,
IA 50703

Full-Season Test 2.6 - 2.9 Day CRM
S2021IANC04b

Top 30 of 48 For Gross Income
(Sorted by Yield)
Average of (3) Replications

PREV. CROP/HERB: Corn, Rye Cover Crop /
Harness Max, Triple Flex,
Atrazine, Roundup

SOIL DESCRIPTION: Marquis loam, well drained, non-
irrigated

SOIL CONDITION: very high P, very high K, 5.8 pH,
2.5% OM, 14.0 CEC

TILLAGE/CULTIVATION: No-Till

PEST MANAGEMENT: Zidua Pro, Warrant Ultra,
Section Three, Cornerstone 5

FERTILITY - Applied N: 16 Spring

Applied N-P-K (units): 16-104-0

SEEDED - RATE - ROW: May 12 144.0 /A 30" spacing

HARVESTED - STAND: Oct 16 125.5 /A

TEST COMMENTS:

Rainfall was spread out fairly consistently throughout the season but the measured amounts were small and the duration between showers was lengthy...sometimes weeks would pass without any precipitation. June was 4" below the 10-yr average and was followed by the hot and dry weeks of July that was only interrupted once by a good soaker on July 15 that provided nearly 2". The system that covered the rest of northern Iowa from Aug 21 - Sept 3 provided 6.1" to this Rottinghaus farm. And while the late rain was very welcome and helped fill top pods, some yield damage had already occurred from drought conditions that lingered earlier in the year.

Company/Brand	Product/Brand	Technol.†	RM	SCN Resist.	Yield Bu/A ↓	Moisture %	Lodging %	Stand (x 1000)	Gross Income \$/Acre	Rank
Golden Harvest	GH2922E3 ↗	E3	2.9	R	69.2	14.1	0	135.3	863	1
Pioneer	P27A17X § ↗	RRX	2.7	R	68.1	13.9	0	125.7	850	2
NuTech	29N02E ↗	E3	2.9	R	68.0	13.8	0	123.3	849	3
FS HiSOY	28E10 ↗	E3	2.8	R	65.8	14.2	0	127.0	821	4
NK Brand	S28-E3 ↗	E3	2.8	MR	65.3	14.1	0	123.3	815	5
Credenz	CZ 2760GTLL ↗	LLGT27	2.7	R	65.1	14.1	5	127.3	812	6
NuTech	28N02E ↗	E3	2.8	R	63.7	13.9	0	138.7	795	7
Hoegemeyer	2831 E ↗	E3	2.8	R	63.7	14.0	8	130.3	795	8
Zinesto	Z2900E ↗	E3	2.9	R	63.7	14.2	0	135.7	795	9
Apex	AE2920 ↗	E3	2.9	R	63.6	14.1	0	127.0	794	10
Golden Harvest	GH2872XF GC ↗	RXF	2.8	R	63.0	14.3	5	125.7	786	12
Genesis	G2960E ↗	E3	2.9	R	62.4	14.2	0	125.7	779	13
Asgrow	AG26XF1 § ↗	RXF	2.6	R	61.9	14.6	0	116.7	772	14
Hoegemeyer	2660 E ↗	E3	2.6	R	61.5	14.2	21	127.0	767	15
Xitavo	XO 2832E ↗	E3	2.8	R	61.4	14.3	0	124.7	766	16
Zinesto	Z2902E ↗	E3	2.9	NA	61.4	14.3	0	124.0	766	17
Asgrow	AG27XF1 § ↗	RXF	2.7	R	61.1	14.4	0	115.0	762	18
Stine	28EC32 § ↗	E3	2.8	R	61.0	14.1	0	135.3	761	19
Cornelius	CB27X81 GC ↗	RRX	2.7	R	60.9	13.8	8	121.3	760	20
Hefty	H26XF2 ↗	RXF	2.6	NA	60.0	14.1	27	120.3	749	21
Cornelius	CB26XF76 ↗	RXF	2.6	R	59.9	14.0	27	127.0	748	22
Apex	AE2800 ↗	E3	2.8	R	59.9	14.3	21	130.0	747	23
Pioneer	P26T23E § ↗	E3	2.6	R	59.7	14.1	5	130.7	745	24
Zinesto	Z2700E ↗	E3	2.7	R	59.5	14.3	5	128.3	742	25
Cornelius	CB27XF34 ↗	RXF	2.7	R	59.1	14.5	27	120.7	737	26
NK Brand	NK27-A7XF ↗	RXF	2.7	MR	58.8	14.1	28	118.7	734	27
Latham	L 2638 E3 ↗	E3	2.6	R	58.7	14.3	38	118.0	732	28
Kruger	K2793XF ↗	RXF	2.7	R	58.5	14.6	0	131.0	729	29
Golden Harvest	GH2722XF § ↗	RXF	2.7	MR	58.4	14.0	16	124.7	729	30
Hefty	H29X1 ↗	RRX	2.9	R	58.2	14.3	0	129.7	726	31
Croplan	CP2400X CK	RRX	2.4	R	63.1	14.2	0	135.7	787	11
					Averages =	60.0	14.2	11	125.5	749
					LSD (0.10) =	3.5	0.2	17		
					LSD (0.25) =	1.9	0.1	9		
					C.V. =	5.6				
corey.rozenboom@firstseedtests.com, (319) 830-8886					Historic yield: 58.75 bu/a, 6 yr(s)					

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Yield & Income Factors: Base Moisture = 13.0% Shrink = 1.3 Drying = \$0.02 Prices: GMO = \$12.50

Report Date: 10/17/2021

† See last page for abbreviation descriptions. Dark colored row identifies the check product found in early- and full-season tests. **Bold** yields are significantly above test average by LSD(0.10). **Italicized** brands exceed the grain moisture limit for this test. **ns** = column values not significantly different. ↗ New! Links to full product yield results at www.firstseedtests.com

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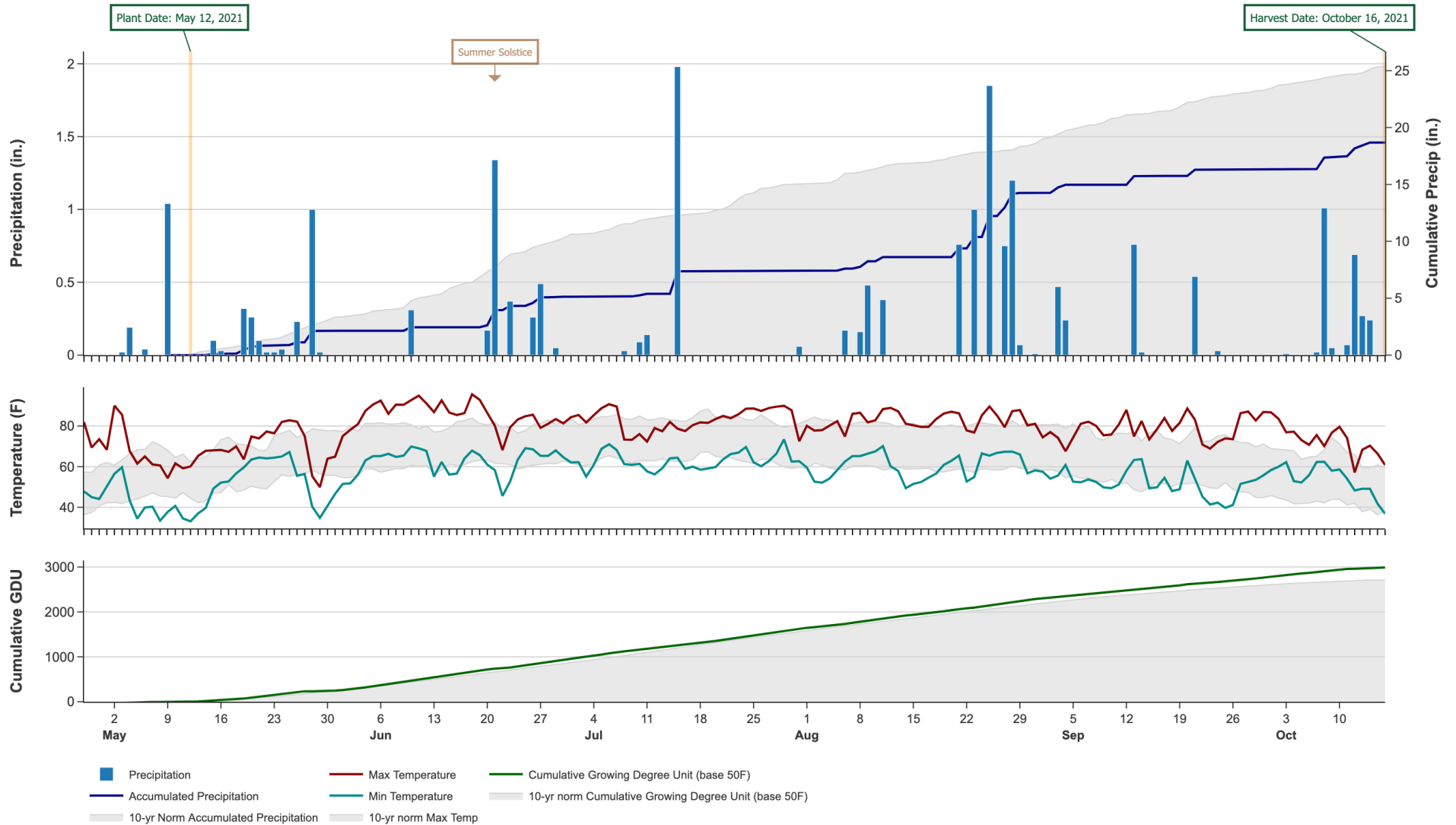
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2021 Soybeans - Iowa North Central [IANC]

Weather Conditions Summary at WATERLOO, IA

Weather Data Retrieved: 10/17/2021

Monthly Total	Apr*	May	Jun	Jul	Aug	Sep	Oct*	Total
Precip (in) Normal (Diff)	0.0 0.3 (-0.3)	3.4 4.7 (-1.3)	3.0 7.0 (-4.0)	2.3 4.8 (-2.5)	6.8 3.5 (+3.3)	2.1 4.7 (-2.6)	2.4 2.1 (+0.3)	20.0 27.1 (-7.1)
GDU Normal (Diff)	37 5 (+31)	328 341 (-13)	686 600 (+85)	693 716 (-23)	661 622 (+38)	480 416 (+63)	221 106 (+114)	3106 2810 (+295)



* First monthly total starts on the date 14 days prior to planting and final monthly total ends on the harvest date.

Note: Weather information from PRISM Climate Group. Data may be revised by the provider after retrieval. FIRST will not revise or update reports to reflect any weather data changes. For information purposes only.

2021 Soybeans - Iowa North Central [IANC]

Early-Season Test Products (48 Total)

Company/Brand	Product/Brand	Technology	SCN	RM	Seed Treat.
Apex	AE2220	E3	R	2.2	CMBV,SA
Apex	AE2420S	E3,ST	R	2.4	CMBV,SA
Cornelius	CB23XF63	RXF	R	2.3	PG+
Cornelius	CB24XF18	RXF	R	2.4	PG+
Credenz	CZ 2121GTLL	LLGT27	MR	2.1	PV,IL,OB
Credenz	CZ 2550GTLL	LLGT27	MR	2.5	PV,IL,OB
Croplan	CP2400X CK	RRX	R	2.4	Untreated
FS HiSOY	21F00	RXF	R	2.1	ACi,B-200
FS HiSOY	23F10	RXF	R	2.3	ACi,B-200
FS HiSOY	25E00	E3	R	2.5	ACi,B-200
Genesis	G2260E	E3	R	2.2	CMBV,SA
Genesis	G2460ES	E3,ST	R	2.4	CMBV,SA
Genesis	G2550E	E3	R	2.5	CMBV,SA
Golden Harvest	GH2102XF §	RXF	MR	2.1	CMBV,SA
Golden Harvest	GH2292E3	E3	MR	2.2	CMBV,SA
Hefty	H21XF2	RXF	NA	2.1	DST4,SA
Hefty	H23XF1	RXF	NA	2.3	DST4,SA
Hefty	H24XF2	RXF	NA	2.4	DST4,SA
Hefty	H25XF1	RXF	NA	2.5	DST4,SA
Hoegemeyer	2141 E	E3	R	2.1	Lum,Lu,IL
Hoegemeyer	2240 E	E3	R	2.2	Lum,Lu,IL
Hoegemeyer	2421 E	E3	R	2.4	Lum,Lu,IL
Kruger	K2294XF	RXF	R	2.2	ACi,IL
Kruger	K2391XF	RXF	R	2.3	ACi,IL
Kruger	K2594XF	RXF	R	2.5	ACi,IL
Latham	L 2193 E3	E3	R	2.1	SS+,SA
Latham	L 2379 E3	E3	R	2.3	SS+,SA
Latham	L 2458 E3	E3	R	2.4	SS+,SA
Latham	L 2549 R2X	RRX	R	2.5	SS+,SA
Loyal	L2130E	E3	R	2.1	CMBV,SA
Loyal	L2530E	E3	R	2.5	CMBV,SA
NK Brand	NK21-H4XF	RXF	MR	2.1	CMBV,SA
NK Brand	NK22-C4E3 §	E3	R	2.2	CMBV,SA
NuTech	21N06E	E3	R	2.1	Lum,Lu,IL
NuTech	22N02E	E3	R	2.2	Lum,Lu,IL
NuTech	24N04E	E3	R	2.4	Lum,Lu,IL
Pioneer	P21A28X §	RRX	R	2.1	Lum,Lu,IL
Pioneer	P25A54X GC	RRX	R	2.5	Untreated
Renk	RS242NXF	RXF	R	2.4	EcTC,SA
Renk	RS248NX	RRX	R	2.4	EcTC,SA
Stine	21EE62 §	E3	R	2.1	SFI
Stine	25EB32 §	E3	R	2.5	SFI

Company/Brand	Brand/Product	Technology	SCN	RM	Seed Treat.
Xitavo	XO 2181E	E3	R	2.1	PV,IL,OB
Xitavo	XO 2501E	E3	R	2.5	PV,IL,OB
Zinesto	Z2101E	E3	R	2.1	DST4,SA
Zinesto	Z2202E	E3	NA	2.2	DST4,SA
Zinesto	Z2302SE	E3,ST	NA	2.3	DST5
Zinesto	Z2401E	E3	R	2.4	DST4,SA

* FIRST does not inspect products for refuge blend. N* indicates the product was entered without a refuge component by the sponsoring seed company. Prior year entries may contain refuge blend.

2021 Soybeans - Iowa North Central [IANC]

Full-Season Test Products (48 Total)

Company/Brand	Product/Brand	Technology	SCN	RM	Seed Treat.
Apex	AE2800	E3	R	2.8	CMBV,SA
Apex	AE2920	E3	R	2.9	CMBV,SA
Asgrow	AG26XF1 §	RXF	R	2.6	ACi,IL
Asgrow	AG27XF1 §	RXF	R	2.7	ACi,IL
Asgrow	AG29XF2 §	RXF	R	2.9	ACi,IL
Cornelius	CB26XF76	RXF	R	2.6	PG+
Cornelius	CB27X81 GC	RRX	R	2.7	PG+
Cornelius	CB27XF34	RXF	R	2.7	PG+
Cornelius	CB29XF09	RXF	R	2.9	PG+
Credenz	CZ 2760GTLL	LLGT27	R	2.7	PV,IL,OB
Croplan	CP2400X CK	RRX	R	2.4	Untreated
FS HiSOY	26F00	RXF	R	2.6	ACi,B-200
FS HiSOY	27F10	RXF	R	2.7	ACi,B-200
FS HiSOY	28E10	E3	R	2.8	ACi,B-200
FS HiSOY	29F10	RXF	R	2.9	ACi,B-200
Genesis	G2960E	E3	R	2.9	CMBV,SA
Golden Harvest	GH2722XF §	RXF	MR	2.7	CMBV,SA
Golden Harvest	GH2872XF GC	RXF	R	2.8	CMBV,SA
Golden Harvest	GH2922E3	E3	R	2.9	CMBV,SA
Hefty	H26XF2	RXF	NA	2.6	DST4,SA
Hefty	H28XF1	RXF	R	2.8	DST5
Hefty	H29X1	RRX	R	2.9	DST4,SA
Hefty	H29XF1	RXF	NA	2.9	DST4,SA
Hoegemeyer	2660 E	E3	R	2.6	Lum,Lu,IL
Hoegemeyer	2831 E	E3	R	2.8	Lum,Lu,IL
Kruger	K2793XF	RXF	R	2.7	ACi,IL
Kruger	K2885XF	RXF	R	2.8	ACi,IL
Kruger	K2902XF	RXF	R	2.9	ACi,IL
Latham	L 2638 E3	E3	R	2.6	SS+,SA
Latham	L 2786 XF	RXF	R	2.7	SS+,SA
Latham	L 2887 R2X	RRX	R	2.8	SS+,SA
Latham	L 2894 E3	E3	R	2.8	SS+,SA
NK Brand	NK27-A7XF	RXF	MR	2.7	CMBV,SA
NK Brand	S28-E3	E3	MR	2.8	CMBV,SA
NuTech	26N06E	E3	R	2.6	Lum,Lu,IL
NuTech	28N02E	E3	R	2.8	Lum,Lu,IL
NuTech	29N02E	E3	R	2.9	Lum,Lu,IL
P3 Genetics	1928E	E3	R	2.8	PG+
Pioneer	P26T23E §	E3	R	2.6	Lum,Lu,IL
Pioneer	P26T57E §	E3	R	2.6	Lum,Lu,IL
Pioneer	P27A17X §	RRX	R	2.7	Lum,Lu,IL
Renk	RS282NXF	RXF	R	2.8	EcTC,SA

Company/Brand	Brand/Product	Technology	SCN	RM	Seed Treat.
Stine	28EC32 §	E3	R	2.8	SFI
Xitavo	XO 2832E	E3	R	2.8	PV,IL,OB
Xitavo	XO 2921E	E3	R	2.9	PV,IL,OB
Zinesto	Z2700E	E3	R	2.7	DST4,SA
Zinesto	Z2900E	E3	R	2.9	DST4,SA
Zinesto	Z2902E	E3	NA	2.9	DST4,SA

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Footnotes and Abbreviations Descriptions

Brand Footnotes

CK	Identifies a check product included in early- and full-season tests.
GC	Grower Comparison product included by FIRST when space permits.
§	United Soybean Board sponsored entry

Soybean Cyst Nematode (SCN) Resistance Rating

S	susceptible
MR	moderate resistance
R	resistant
n/a	info unavailable

Soybeans Technologies

E3	Enlist™ E3
LLGT27	LibertyLink® GT27®
RRX	Roundup Ready 2 Xtend®
RXF	Roundup Ready 2 XtendFlex®
ST	Sulfonylurea tolerant

Soybeans Seed Treatments*

NA	Not Available
ACi,B-200	Acceleron® Standard Insecticide-Fungicide, B-200 SAT
ACi,IL	Acceleron® Standard Insecticide-Fungicide, ILeVO
CMBV,SA	Cruisermx® Beans, Vibrance®, Saltro®
DST4,SA	Dominance 4 ST,Saltro®
DST5	Dominance 5 ST
EcTC,SA	Eclipse US Total Coverage Trio IM, N-Force, Saltro®
Lum,Lu,IL	LumiGEN™, Lumisena™, ILeVO
PG+	Profit Guard +
PV,IL,OB	Poncho®/Votivo®, ILeVO, Obvius Plus
SF1	Stine XP F&I
SS+,SA	SoyShield Plus, Saltro®
Untreated	No seed treatment

* Seed treatments may include unspecified plant health promoting components.