

2021 SCN UNIFORM I

Strain	FPhlm	Parentage	Previous testing	Gen. Comp.	Traits	SCN Resistance source
1 MN1410	WGbf	Unknown	15	F5		None
2 ND Dickey (0)	PGy	Pioneer 91M10 x Sheyenne	1	F4		None
3 U11-917032 (SCN)	PTbl	LD02-4485 x U03-100612	6	F6		PI 88788
4 U14-103015	PLtbl	LG07-2249 x LG07-6944	2	F5	Diversity	None
5 E15338	PGibl	E09088 x E12901	3	F5		PI 88788
6 MCH13-104087	PGy	M06-288181 x M06-358188	3	F5		PI 88788
7 M13-250030	PGbf	M06-288190 x AR09-191018	1	F5		PI 88788
8 M13-250046	PGbf	M06-288190 x AR09-191018	1	F5		PI 88788
9 M13-251003	PGy/bf	M06-289273 x AR09-291011	20SCN U0	F5		PI 88788
10 M13-262015	PGbf	M03-172059 x LD08-12435a	1	F5		PI 88788
11 M13-262053	PGibl/bf	M03-172059 x LD08-12435a	1	F5		PI 88788
12 M13-266011	P+WGy	MN1505SP X LD10-5903a	1	F5	Rag 1	PI 88788
13 M14-122031	PTbr/y	M08-365038 x IA1026	20SCN P I	F5		PI 88788
14 M14-122035	PTy	M08-365038 x IA1026	20SCN P I	F5		PI 88788
15 M14-126012	WTy	M07-278126 x M07-297007	20SCN P I	F5		PI 88788
16 M14-129066	PGibl	M08-434072 x LD10-2715	20SCN P I	F5		PI 88788

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Entry	IL SCN screening										MN
	cyst counts			HG 0		cyst counts			HG 2.5.7		IDC
	rep1	rep2	rep3	FI	rating	rep1	rep2	rep3	FI	rating	score
1 MN1410	No data available					201	268	275	88	NR	1.0
2 ND Dickey (0)						391	194	279	106	NR	1.0
3 U11-917032 (SCN)						211	137	119	57	LR	1.0
4 U14-103015						201	289	288	95	NR	1.0
5 E15338						249	251	349	104	NR	1.0
6 MCH13-104087						254	353	299	111	NR	1.0
7 M13-250030						126	132	176	53	LR	1.0
8 M13-250046						36	54	43	16	R	1.0
9 M13-251003						95	14	9	14	R	1.0
10 M13-262015						227	186	248	81	NR	1.0
11 M13-262053						135	242	145	64	NR	1.0
12 M13-266011						127	144	254	64	NR	1.0
13 M14-122031						204	142	149	61	NR	1.0
14 M14-122035						129	76	80	35	MR	1.0
15 M14-126012						163	180	212	68	NR	1.0
16 M14-129066						225	239	291	93	NR	1.0

(*)=small root, (.)=missing sample, (**)=rep data too variable to rate

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Predicted resistance genes based on SNP marker analysis						
Entry	SCN	Iron Chlorosis	Phytophthora	Brown stem rot	Frogeye leaf spot	Stem canker
1 MN1410	no marker data available					
2 ND Dickey (0)	no marker data available					
3 U11-917032 (SCN)	no marker data available					
4 U14-103015	no marker data available					
5 E15338	Rhg1-PI88788	LgA1+LgN+Ch13	Rps1k	R	S	R
6 MCH13-104087	Rhg1-PI88788, Het Rhg4	LgA1+LgN+Ch13	Rps1c	Het	S	R
7 M13-250030	no marker data available					
8 M13-250046	no marker data available					
9 M13-251003	no marker data available					
10 M13-262015	no marker data available					
11 M13-262053	no marker data available					
12 M13-266011	no marker data available					
13 M14-122031	no marker data available					
14 M14-122035	no marker data available					
15 M14-126012	none	Ch13, Het LgN	Het Rps1c	Het	R	R
16 M14-129066	no marker data available					

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2021 Summary

2021 Summary														
		Yield						Seed						
		All		Infested		Non-infested		Maturity	Lodging	Height	weight	quality	protein	oil
Entry		bu/a	rank	bu/a	rank	bu/a	rank	date	score	in.	g/100	score	@13%	@13%
	Locations	7		5*		2		7	7	7	7	7	7	7
1	MN1410	48.3	14	46.4	14	52.7	12	915	1.6	35	17.0	1.4	35.3	19.1
2	ND Dickey (0)	44.8	16	41.8	16	51.8	14	-4	1.5	31	17.0	1.4	34.7	19.0
3	U11-917032 (SCN)	55.0	3	53.7	2	58.1	6	4	1.9	32	16.4	1.4	34.0	19.6
4	U14-103015	50.8	11	47.6	11	58.5	4	6	1.8	33	17.7	1.6	35.4	19.1
5	E15338	56.0	1	54.6	1	59.1	3	4	2.1	35	16.8	1.3	33.8	19.0
6	MCH13-104087	48.4	12	46.8	13	52.2	13	0	1.6	38	14.9	1.4	34.5	19.0
7	M13-250030	53.8	5	51.9	7	58.1	5	8	1.6	39	16.7	1.7	35.4	18.2
8	M13-250046	48.1	15	46.1	15	53.0	11	0	2.3	36	18.1	1.4	35.1	19.3
9	M13-251003	51.7	10	50.0	9	55.6	10	-2	1.7	37	16.5	2.0	34.9	18.6
10	M13-262015	52.9	7	51.7	8	55.6	9	6	1.5	31	15.2	1.4	33.0	19.4
11	M13-262053	53.7	6	52.2	5	57.3	8	7	1.7	36	15.4	1.4	33.6	19.1
12	M13-266011	48.3	13	47.0	12	51.0	16	3	1.3	33	19.6	1.5	36.5	18.2
13	M14-122031	54.6	4	52.2	4	60.3	2	5	1.7	32	17.3	1.7	34.9	19.2
14	M14-122035	55.9	2	53.5	3	61.4	1	6	1.8	34	17.8	1.4	35.3	19.4
15	M14-126012	51.8	8	49.1	10	58.0	7	4	1.7	36	16.1	2.0	35.8	18.4
16	M14-129066	51.8	8	52.0	6	51.2	15	5	2.0	33	16.7	1.4	35.7	18.6
Mean		51.6		49.8		55.9		3.4	1.7	34.4	16.8	1.5	34.9	18.9
C.V. %		10.5		11.3		9.1		14.0	25.4	7.4				
LSD(2-sided,.05)		3.3		4.1		5.8		1.5	0.3	1.5				
Replications		19		13		6		19	19	19				

*Decatur, MI not included in overall means due to high CV.

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2 Year Summary

2 Year Summary														
		Yield						Seed						
		All		Infested		Non-infested		Maturity	Lodging	Height	weight	quality	protein	oil
Entry		bu/a	rank	bu/a	rank	bu/a	rank	date	score	in.	g/100	score	@13%	@13%
	Locations	12		9		3		10	12	12	11	11	11	11
1	MN1410	44.5	10	42.9	10	48.7	10	916	1.6	34	16.9	1.4	35.1	19.0
2	ND Dickey (0)	40.8	11	38.9	11	45.5	11	-4	1.4	30	17.0	1.4	34.6	19.0
3	U11-917032 (SCN)	52.9	1	52.5	1	53.8	4	5	1.7	31	16.4	1.3	33.5	19.5
4	U14-103015	47.9	6	46.8	6	54.6	1	6	1.5	33	17.1	1.4	35.0	19.2
5	E15338	52.8	2	51.5	3	54.2	2	4	1.8	34	16.6	1.2	33.5	18.8
6	MCH13-104087	46.8	8	46.2	7	49.0	9	1	1.5	37	15.0	1.3	34.2	19.0
7	M13-250030	51.8	3	49.9	5	54.1	3	7	1.5	38	16.2	1.5	35.0	18.2
8	M13-250046	47.5	7	46.2	8	51.2	6	1	2.1	36	18.0	1.3	34.7	19.1
10	M13-262015	50.5	5	50.8	4	51.2	5	6	1.4	32	15.0	1.3	32.8	19.4
11	M13-262053	51.8	3	52.3	2	49.3	8	7	1.6	35	15.2	1.3	33.3	19.1
12	M13-266011	45.1	9	43.7	9	49.6	7	2	1.3	33	19.2	1.4	36.1	18.3
Mean		48.4		47.4		51.0		3.5	1.6	33.8	16.6	1.4	34.3	19.0

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Yield (bu/a)								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	44.8	16.5	28.3	28.8	55.6	80.3	58.1	47.2
2 ND Dickey (0)	38.8	24.9	25.7	30.7	59.1	63.4	58.8	44.8
3 U11-917032 (SCN)	47.3	42.2	40.4	27.6	62.9	91.9	58.5	57.6
4 U14-103015	55.7	28.9	33.3	15.7	61.1	73.6	57.7	59.3
5 E15338	56.7	49.8	41.8	28.8	64.7	82.6	66.0	52.3
6 MCH13-104087	46.4	27.9	35.4	33.4	61.1	59.4	57.2	47.2
7 M13-250030	54.7	39.2	41.8	35.4	60.5	68.8	58.4	57.8
8 M13-250046	48.2	43.7	35.8	33.7	61.9	57.6	50.7	55.2
9 M13-251003	41.3	38.0	32.6	29.6	59.5	79.9	57.9	53.3
10 M13-262015	54.7	38.0	35.8	34.9	60.6	74.2	57.8	53.4
11 M13-262053	52.3	33.0	36.3	26.9	61.1	85.9	60.4	54.1
12 M13-266011	46.9	43.5	31.8	18.2	57.7	82.3	59.0	43.1
13 M14-122031	49.9	39.0	40.5	30.5	69.0	72.9	59.3	61.3
14 M14-122035	51.7	40.4	36.8	35.2	70.5	75.3	64.3	58.5
15 M14-126012	45.1	37.7	34.8	35.5	63.5	68.6	58.7	57.3
16 M14-129066	53.7	42.5	35.1	32.7	57.9	82.2	50.9	51.4
Mean	49.3	36.6	35.4	29.9	61.7	74.9	58.4	53.4
C.V. %	9.2	27.5*	12.8	12.3	9.5	6.8	7.7	10.5
LSD(2-sided,.05)	9.6	20.3	7.3	5.7	9.3	10.8	7.5	9.3
Replications	2	3	3	3	3	2	3	3
Row spacing (in.)	30	30	30	30	30	17	13	13

*Decatur, MI high CV due to disease pressure

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Yield (rank)								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	14	16	15	11	16	6	10	13
2 ND Dickey (0)	16	15	16	8	13	14	6	15
3 U11-917032 (SCN)	10	5	4	13	5	1	8	5
4 U14-103015	2	13	12	16	8	10	13	2
5 E15338	1	1	2	12	3	3	1	11
6 MCH13-104087	12	14	9	6	7	15	14	13
7 M13-250030	3	7	1	2	11	12	9	4
8 M13-250046	9	2	7	5	6	16	16	7
9 M13-251003	15	10	13	10	12	7	11	10
10 M13-262015	3	9	8	4	10	9	12	9
11 M13-262053	6	12	6	14	9	2	3	8
12 M13-266011	11	3	14	15	15	4	5	16
13 M14-122031	8	8	3	9	2	11	4	1
14 M14-122035	7	6	5	3	1	8	2	3
15 M14-126012	13	11	11	1	4	13	7	6
16 M14-129066	5	4	10	7	14	5	15	12

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Maturity								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	8/29		9/16	9/17	9/13	9/15	9/21	9/26
2 ND Dickey (0)	-2		-2	-6	-3	-2	-8	-7
3 U11-917032 (SCN)	8		6	7	4	2	-2	4
4 U14-103015	11		6	11	4	1	2	4
5 E15338	9		6	5	4	3	0	4
6 MCH13-104087	2		-1	1	2	-2	-2	0
7 M13-250030	14		6	6	5	5	11	6
8 M13-250046	4		-5	-2	2	-1	-2	4
9 M13-251003	0		-5	-2	2	-1	-3	-3
10 M13-262015	11		7	11	5	3	1	4
11 M13-262053	12		5	11	6	4	5	3
12 M13-266011	6		6	-1	1	3	-1	4
13 M14-122031	10		8	9	5	1	-1	3
14 M14-122035	12		6	9	7	5	0	4
15 M14-126012	7		1	5	5	7	-1	3
16 M14-129066	10		4	10	2	2	2	4
Planted	5/24	5/07	5/16	5/26	5/11	5/31	5/17	6/01

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Lodging (score)								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	2.0		1.0	2.1	2.3	1.5	1.3	1.3
2 ND Dickey (0)	1.0		1.0	2.0	2.0	2.5	1.0	1.0
3 U11-917032 (SCN)	3.0		1.3	2.0	3.0	1.5	1.0	1.7
4 U14-103015	2.0		1.0	2.0	2.7	2.0	1.0	1.7
5 E15338	2.8		1.7	2.7	2.0	2.0	1.5	2.0
6 MCH13-104087	1.5		1.0	2.0	2.0	2.5	1.2	1.0
7 M13-250030	2.0		1.0	2.0	2.0	1.0	1.5	1.8
8 M13-250046	2.8		1.3	3.0	2.3	3.0	1.8	2.0
9 M13-251003	2.0		1.0	2.5	2.3	2.0	1.0	1.2
10 M13-262015	2.0		1.0	2.0	2.0	1.0	1.0	1.2
11 M13-262053	2.3		1.0	2.0	2.7	1.5	1.2	1.2
12 M13-266011	1.0		1.0	1.0	2.3	1.5	1.2	1.2
13 M14-122031	1.8		1.3	2.3	2.0	2.0	1.0	1.7
14 M14-122035	2.3		1.7	2.7	2.3	1.5	1.0	1.3
15 M14-126012	1.8		1.0	2.7	2.0	2.0	1.0	1.2
16 M14-129066	3.0		1.3	3.0	2.7	1.0	1.5	1.7

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Height (inches)								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	30		31	29	39	39	40	35
2 ND Dickey (0)	26		26	31	34	37	33	29
3 U11-917032 (SCN)	28		30	27	35	38	32	32
4 U14-103015	27		29	27	39	41	34	34
5 E15338	30		32	30	39	39	40	36
6 MCH13-104087	30		35	39	43	42	45	35
7 M13-250030	34		35	35	45	44	42	41
8 M13-250046	30		33	34	40	38	41	37
9 M13-251003	29		34	31	41	42	42	37
10 M13-262015	29		27	28	34	38	31	30
11 M13-262053	31		33	31	38	42	37	37
12 M13-266011	29		28	27	36	41	34	35
13 M14-122031	27		29	25	36	40	34	34
14 M14-122035	28		31	31	43	41	34	32
15 M14-126012	29		31	34	45	41	36	35
16 M14-129066	28		29	30	38	39	33	35

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Seed Weight (g/100)								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	15.5		15.2	15.8	16.7	20.9	18.7	16.1
2 ND Dickey (0)	15.3		14.9	15.4	17.5	19.8	18.8	17.6
3 U11-917032 (SCN)	13.9		14.8	15.8	16.3	19.4	16.6	18.3
4 U14-103015	16.2		15.9	19.6	17.1	19.6	17.6	17.8
5 E15338	15.4		15.9	15.3	16.5	18.6	18.9	17.2
6 MCH13-104087	14.4		12.9	14.5	14.1	17.0	16.7	14.4
7 M13-250030	14.7		16.8	16.5	16.5	17.7	17.1	17.3
8 M13-250046	16.3		15.2	18.2	17.5	19.2	19.2	21.1
9 M13-251003	14.9		13.3	16.8	16.1	19.0	17.9	17.7
10 M13-262015	13.1		14.5	15.3	15.2	17.1	16.6	14.6
11 M13-262053	14.0		14.7	15.6	15.5	17.1	16.4	14.8
12 M13-266011	18.9		18.1	16.4	19.6	23.4	20.2	20.3
13 M14-122031	14.6		17.6	13.9	17.0	20.5	18.9	18.4
14 M14-122035	15.7		17.6	16.7	16.8	21.1	18.4	18.5
15 M14-126012	14.6		14.8	15.4	16.4	18.7	16.5	16.5
16 M14-129066	14.1		15.0	15.5	15.7	19.7	17.8	18.8

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Seed Quality (score)								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	1.0		2.0	2.0	1.0	1.0	1.5	1.5
2 ND Dickey (0)	1.0		2.0	2.0	1.0	1.0	1.5	1.5
3 U11-917032 (SCN)	2.0		1.0	2.0	1.0	1.0	1.5	1.5
4 U14-103015	2.0		2.0	2.0	1.0	1.0	1.5	1.5
5 E15338	1.0		2.0	1.0	1.0	1.0	1.5	1.5
6 MCH13-104087	1.0		3.0	1.0	1.0	1.0	1.5	1.5
7 M13-250030	3.0		2.0	1.0	2.0	1.0	1.5	1.5
8 M13-250046	2.0		2.0	1.0	1.0	1.0	1.5	1.5
9 M13-251003	2.0		3.0	3.0	2.0	1.0	1.5	1.5
10 M13-262015	1.0		3.0	1.0	1.0	1.0	1.5	1.5
11 M13-262053	1.0		2.0	2.0	1.0	1.0	1.5	1.5
12 M13-266011	1.0		2.0	3.0	1.0	1.0	1.5	1.0
13 M14-122031	1.0		3.0	3.0	1.0	1.0	1.5	1.5
14 M14-122035	2.0		2.0	1.0	1.0	1.0	1.5	1.5
15 M14-126012	2.0		3.0	2.0	1.0	3.0	1.5	1.5
16 M14-129066	2.0		2.0	1.0	1.0	1.0	1.5	1.5

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Protein (%)								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	37.0		33.8	34.9	32.3	37.8	35.8	35.8
2 ND Dickey (0)	36.6		33.8	34.0	32.9	35.4	35.4	34.9
3 U11-917032 (SCN)	34.9		31.8	35.3	31.1	35.9	34.9	34.4
4 U14-103015	36.8		33.1	37.3	32.8	36.7	35.4	35.4
5 E15338	34.4		32.0	34.6	31.1	35.5	34.5	34.2
6 MCH13-104087	35.4		33.2	34.4	31.6	36.7	35.6	34.7
7 M13-250030	36.6		34.6	36.5	33.3	36.9	35.1	34.8
8 M13-250046	37.6		33.5	34.3	31.7	36.5	35.5	36.4
9 M13-251003	35.9		33.9	34.2	32.8	36.9	35.4	34.9
10 M13-262015	32.7		32.5	35.0	31.0	34.1	33.2	33.0
11 M13-262053	33.7		31.9	36.5	31.4	34.7	33.6	33.5
12 M13-266011	37.8		34.6	37.8	33.8	38.4	36.5	36.6
13 M14-122031	33.8		33.4	36.8	32.8	36.8	35.9	34.6
14 M14-122035	35.1		34.5	36.2	33.2	37.0	36.1	34.7
15 M14-126012	37.0		35.0	35.1	34.4	38.5	35.5	35.2
16 M14-129066	35.9		33.9	37.4	32.8	37.5	36.1	36.2

2021 SCN UNIFORM I

Oil (%)								
	Urbana	Decatur	Lamberton	Rosemount	Waseca	Thamesville	St. Pauls	Woodstock
	IL	MI	MN	MN	MN	ON	ON	ON
SCN HG Type	Inf	Inf	Inf	Inf	Inf	Inf	NI	NI
Strain								
1 MN1410	18.7		19.1	19.1	20.7	18.6	19.0	18.5
2 ND Dickey (0)	17.9		18.9	18.5	20.4	19.7	19.1	18.6
3 U11-917032 (SCN)	19.4		20.2	18.5	21.2	19.7	19.3	18.8
4 U14-103015	18.9		20.1	17.6	20.2	19.3	18.8	18.5
5 E15338	18.9		18.6	18.6	19.9	19.7	18.2	18.7
6 MCH13-104087	18.9		18.8	18.1	20.4	18.8	19.1	18.7
7 M13-250030	16.7		18.5	18.8	18.8	17.8	18.6	18.4
8 M13-250046	18.6		19.7	19.1	20.6	20.0	18.6	18.1
9 M13-251003	17.8		18.5	19.2	19.0	18.5	18.8	18.3
10 M13-262015	20.0		19.2	18.2	20.4	19.6	19.0	19.3
11 M13-262053	19.2		19.2	18.2	20.4	19.0	18.9	19.1
12 M13-266011	18.2		18.5	17.7	19.7	18.2	17.3	18.0
13 M14-122031	19.9		19.6	18.2	20.3	19.6	18.1	18.9
14 M14-122035	20.1		19.2	19.6	19.5	19.8	18.1	19.2
15 M14-126012	18.2		18.5	19.0	19.1	18.3	18.1	17.6
16 M14-129066	19.1		19.0	18.0	19.7	18.3	17.7	18.4