Table 1

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

ADVANCED CHIP-PROCESSING TRIAL
MONTCALM RESEARCH CENTER
May 8 to September 26, 2023 (141 days)
DD Base 40°F 2952[9]

LINE	PVY Resistant	N	CWT/A US#1	CWT/A TOTAL	PERCENT OF TOTAL[1] US#1	Bs	As	OV	PO	SP GR	CHIP SCORE[2]	CHIP SED[3]	PERCENT (%) TUBER QUALITY[4] HH	VD	IBS	BC	SCAB[5]	MAT[6]	BRUISE[7]	LB[8]	3-YR AVG US#1 CWT/A
MSBB630-2	PVYR	2	517	559	93	8	92	2	1	1.081	1.5	1.0	10	10	5	10	1.2	5.0	2.3	-	555
MSFF036-1	PVYR	2	511	535	96	5	92	4	0	1.077	1.5	1.0	0	20	0	0	1.7	4.5	1.9	-	622*
MSGG409-3	PVYR	2	500	546	92	8	92	0	1	1.078	1.5	1.0	0	55	0	0	1.7	5.0	2.0	MR	-
MSBB636-11	PVYR	2	498	516	97	2	92	5	1	1.075	1.5	0.0	5	10	0	0	0.7	4.0	1.6	MS	581*
MSDD376-4	PVYR	2	477	496	96	4	95	1	1	1.088	1.5	1.0	25	10	0	5	1.3	5.0	1.6	-	487*
MSDD553-1	PVYR	2	459	478	96	4	93	3	0	1.078	1.5	1.0	5	25	0	0	1.8	5.0	1.8	MR	542*
MSEE035-4	PVYR	2	446	485	92	8	91	2	0	1.091	1.5	2.0	0	0	10	5	0.5	4.0	2.6	R	-
MSEE171-2		2	425	448	95	5	93	2	0	1.080	2.0	1.0	0	15	0	0	0.8	5.0	1.7	-	-
MSGG194-3	PVYR	2	416	448	93	7	93	0	1	1.079	1.5	2.0	5	35	0	0	2.2	4.0	1.8	-	-
MSFF037-17	PVYR	2	412	451	91	9	91	1	1	1.090	1.0	0.0	0	25	0	0	1.7	4.0	2.0	MS	540*
MSDD372-07	PVYR	2	411	442	93	7	93	0	0	1.094	2.0	2.0	0	15	0	0	0.5	5.0	1.6	R	517*
MSFF038-3	PVYR	2	409	429	96	4	95	1	2	1.086	2.0	2.0	25	5	0	0	1.7	3.0	1.2	MS	-
MSBB635-14	PVYR	2	404	427	95	4	93	2	2	1.077	1.5	2.0	0	50	0	0	1.0	4.5	1.9	-	478
MSEE207-2	PVYR	2	398	423	94	6	94	1	1	1.083	2.0	1.0	0	25	0	0	0.3	5.0	1.8	MR	500*
MSFF007-2		2	398	432	92	8	91	1	1	1.085	1.5	2.0	0	25	5	0	1.0	4.5	2.0	MS	454*
MSDD249-9	PVYR	2	383	398	96	4	92	5	0	1.087	1.5	2.0	20	5	0	0	1.0	3.0	1.1	MR	462*
MSAA260-3		2	380	397	96	4	96	0	0	1.084	1.0	0.0	0	15	0	0	1.7	4.0	2.0	MS	436
MSBB060-1	PVYR	2	376	391	96	5	94	2	0	1.079	2.0	2.0	0	45	0	0	0.7	5.0	1.8	-	-
MSAA076-6		2	369	439	84	15	84	0	1	1.089	1.0	0.0	0	10	10	0	0.8	2.5	2.4	-	424
MSEE016-07		2	367	380	97	4	95	2	0	1.094	1.5	1.0	5	10	0	0	0.8	5.0	1.5	-	-
MSBB230-1		2	362	385	94	6	94	0	1	1.085	2.0	2.0	0	20	0	0	1.7	3.0	1.8	-	-
MSFF079-16	PVYR	2	362	382	95	3	91	4	3	1.083	2.0	0.0	5	10	10	0	0.5	4.0	2.0	MR	398*
MSAA240-5		2	354	385	93	5	92	1	3	1.086	1.0	0.0	0	20	5	0	2.5	3.5	2.3	MS	-
MSBB058-3	PVYR	2	352	374	94	6	92	2	0	1.085	1.0	1.0	5	20	0	0	1.3	5.0	1.7	R	389
MSFF077-4	PVYR	2	350	361	97	3	96	2	0	1.078	1.5	1.0	5	10	0	0	1.7	3.5	1.6	MS	-
MSBB614-15		2	348	365	96	5	92	4	0	1.081	1.0	1.0	25	5	0	0	0.7	5.0	1.1	R	381
MSFF097-6	PVYR	2	345	382	90	10	90	0	1	1.087	1.5	1.0	0	5	0	5	1.3	5.0	2.5	MR	375*
MSW474-1		2	315	362	88	13	88	0	0	1.082	1.0	1.0	5	0	0	5	0.5	5.0	2.0	MS	385
MSDD244-05	PVYR	2	308	337	92	6	90	2	4	1.084	1.5	1.0	0	20	0	0	0.7	3.5	1.8	MS	394*
MSDD247-07	PVYR	2	308	329	94	7	92	2	0	1.098	1.0	1.0	0	0	15	0	1.0	3.0	2.6	MR	363
MSBB058-1		2	306	336	91	9	91	0	0	1.095	2.0	1.0	0	0	0	0	1.3	3.5	1.2	S	418*
Lamoka		**2**	**306**	**329**	**93**	**6**	**92**	**1**	**2**	**1.084**	**1.5**	**1.0**	**0**	**40**	**5**	**0**	**1.3**	**3.0**	**2.0**	-	**327**
MSEE016-10	PVYR	2	304	362	84	16	84	0	1	1.095	1.0	2.0	0	0	0	0	1.3	3.0	1.2	-	-
MSEE031-3	PVYR	2	304	330	92	7	92	0	1	1.083	2.0	2.0	0	20	0	0	0.8	2.5	1.7	MR	-
MSEE182-3	PVYR	2	301	345	87	13	87	0	0	1.077	2.0	2.0	0	0	0	0	0.3	2.5	0.3	MS	-
MSAA217-3		2	297	309	96	4	93	3	1	1.093	1.0	1.0	20	25	5	0	1.0	4.5	1.7	-	-

LINE	PVY Resistant	N	CWT/A		PERCENT OF TOTAL[1]					SP GR	CHIP SCORE[2]	CHIP SED[3]	PERCENT (%) TUBER QUALITY[4]				SCAB[5]	MAT[6]	BRUISE[7]	LB[8]	3-YR AVG US#1 CWT/A
			US#1	TOTAL	US#1	Bs	As	OV	PO				HH	VD	IBS	BC					
MSDD247-11	PVYR	2	295	346	85	9	85	0	6	1.090	1.5	0.0	0	0	0	5	0.5	2.5	2.8	MR	366
MSBB610-13	PVYR	2	294	306	96	3	94	2	1	1.082	1.0	1.0	0	10	5	0	1.2	2.5	2.1	-	396*
Dundee (MSZ242-13)		2	285	315	90	8	89	1	3	1.092	1.5	2.0	5	0	0	0	0.8	3.5	0.9	MS	355
Manistee		**2**	**272**	**308**	**88**	**12**	**88**	**0**	**0**	**1.077**	**1.5**	**1.0**	**10**	**10**	**0**	**0**	**2.5**	**2.0**	**1.6**	-	**251***
MSDD089-2		2	259	274	95	5	95	0	1	1.078	1.0	0.0	0	0	0	0	1.3	4.0	2.0	-	335*
MSZ025-2		2	256	273	94	6	93	1	0	1.076	2.0	2.0	0	10	5	0	1.2	2.0	1.9	-	-
MSGG263-1	PVYR	2	254	283	90	8	89	2	2	1.073	1.5	2.0	0	20	0	0	1.2	4.5	1.8	MS	-
MSGG349-3	PVYR	2	243	279	87	11	87	0	2	1.070	2.0	1.0	0	15	0	0	1.2	2.5	1.8	MR	-
Mackinaw	**PVYR**	**2**	**239**	**259**	**93**	**6**	**93**	**0**	**2**	**1.092**	**1.0**	**1.0**	**0**	**30**	**5**	**0**	**0.7**	**4.0**	**2.0**	**MR**	**402**
MSDD085-13	PVYR	2	235	259	91	10	91	0	0	1.081	1.0	1.0	0	20	0	0	0.7	2.0	1.8	-	263
MSDD039-01		2	231	265	88	13	88	0	1	1.078	2.0	2.0	0	20	0	0	1.2	3.0	1.7	-	-
MSDD244-15	PVYR	2	230	241	96	4	96	0	1	1.078	1.0	0.0	0	5	0	0	1.2	4.0	1.9	R	345
Petoskey		2	229	255	90	9	90	0	2	1.086	1.5	1.0	0	0	0	0	1.3	3.0	1.3	-	363
MSDD042-01		2	224	275	81	3	81	0	17	1.074	2.0	2.0	5	10	0	0	1.3	3.0	1.5	-	-
MSEE115-1		2	203	216	94	5	94	0	2	1.094	1.5	1.0	5	5	0	0	0.7	3.0	1.3	-	-
MSGG426-2	PVYR	2	203	224	91	9	91	0	0	1.080	1.5	1.0	0	30	0	0	0.7	3.5	1.8	MR	-
MSGG195-1	PVYR	2	197	234	85	15	85	0	1	1.075	1.5	1.0	0	5	0	0	1.7	2.5	1.8	-	-
MSFF292-1		2	185	228	81	18	81	0	1	1.086	1.5	1.0	0	5	0	0	1.7	3.0	1.8	-	279*
NY163	PVYR	2	154	197	79	21	79	0	0	1.083	1.0	1.0	0	25	0	0	1.7	2.5	2.0	S	286*
MSFF321-1		2	151	227	67	33	67	0	1	1.087	1.0	2.0	0	0	5	0	0.5	2.5	1.8	MS	-
Snowden		**2**	**124**	**164**	**76**	**24**	**76**	**0**	**1**	**1.080**	**1.0**	**1.0**	**5**	**25**	**0**	**0**	**3.0**	**2**	**1.9**	**MS**	**285**
Atlantic		**2**	**117**	**132**	**88**	**10**	**88**	**0**	**2**	**1.081**	**1.5**	**1.0**	**10**	**0**	**0**	**0**	**2.6**	**2.0**	**1.4**	**S**	**275**
MEAN			321	351						1.1							1.2	3.6	1.8		376

[1]SIZE: B: < 2 in.; A: 2-3.25 in.; OV: > 3.25 in.; PO: Pickouts.

[2]CHIP SCORE: SNAC Scale (Out of the field); Ratings: 1-5; 1: Excellent, 5: Poor.

[3]SED: Stem End Defect, Based on Paul Bethke's (USDA/UWisconsin - Madison) 0 - 5 scale. 0 = no SED; 3 = significant SED; 5 = severe SED

[4]QUALITY: HH: Hollow Heart; BC: Brown Center; VD: Vascular Discoloration; IBS: Internal Brown Spot. Percent of 20 Oversize and/or A-size tubers cut.

[5]SCAB DISEASE RATING: MSU Scab Nursery; 0: No Infection; 1: Low Infection <5%; 3: Intermediate; 5: Highly Susceptible.

[6]MATURITY RATING: August 17, 2023; Ratings 1-5; 1: Early (vines completely dead); 5: Late (vigorous vine, some flowering).

[7]BRUISE: Simulated blackspot bruise test, average number of spots per tuber.

[8]LB Late blight (*P. infestans* US-23) foliar disease reaction. R=Resistant, MR=Moderate Resistance, MS=Moderate Susceptibility, S=Susceptible

Plant Date:	5/8/23
Vine Kill:	9/1/23
Days from planting to vine kill:	116

[9]Enviroweather: Entrican Station. Planting to vine kill

Table 2

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

NORTH CENTRAL REGIONAL TRIAL
MONTCALM RESEARCH CENTER
May 09 to September 05, 2023 (119 days)
DD Base 40°F 2895[8]

LINE	PVY RESISTANT	N	CWT/A US#1	CWT/A TOTAL	PERCENT OF TOTAL[1] US#1	Bs	As	OV	PO	SP GR	CHIP SCORE[2]	OTF SED[3]	PERCENT (%) TUBER QUALITY[4] HH	VD	IBS	BC	SCAB[5]	MAT[6]
Chip																		
W19ND1810Y-10		1	488	577	84	10	84	0	6	1.077	-	-	0	0	0	0	4.0	4.0
MSHH119-1		1	482	498	97	3	97	0	0	1.086	1.0	0.0	0	20	0	10	0.5	3.0
MN20ND1810Y-297A		1	464	516	90	10	90	0	0	1.068	1.0	1.0	0	0	0	0	5.0	3.0
MSHH004-2	PVYR	1	462	511	90	10	90	0	0	1.081	2.0	2.0	0	20	0	10	1.5	3.0
ND1845B-1Y		1	455	536	85	7	85	0	8	1.076	1.0	1.0	30	0	0	0	4.0	4.0
MSHH018-4	PVYR	1	444	487	91	9	91	0	0	1.089	1.0	1.0	0	0	0	0	1.5	5.0
MSHH048-4	PVYR	1	429	478	90	10	87	3	0	1.081	1.0	1.0	0	0	0	0	3.0	4.0
MSHH069-3	PVYR	1	424	442	96	4	96	0	0	1.073	1.0	3.0	0	0	20	0	1.5	3.0
W19023-17		1	423	445	95	5	95	0	0	1.080	2.0	2.0	0	30	0	0	2.5	5.0
MSHH018-3	PVYR	1	414	436	95	5	95	0	0	1.086	-	-	0	0	0	0	2.0	3.0
MSHH063-2	PVYR	1	413	462	89	11	89	0	0	1.083	1.0	1.0	0	30	0	0	3.0	4.0
MN20W19022-005		1	392	418	94	4	94	0	2	1.076	1.0	1.0	0	0	30	0	1.0	3.0
MSHH066-6	PVYR	1	392	407	96	4	96	0	0	1.087	1.0	0.0	10	10	10	0	1.5	4.0
MSHH043-03	PVYR	1	391	493	79	21	79	0	0	1.080	1.0	1.0	0	0	0	0	0.5	5.0
MN20AF7174-001		1	390	433	90	9	90	0	1	1.074	2.0	2.0	10	0	0	0	2.0	2.0
W19007-4		1	388	467	83	8	83	0	9	1.082	1.0	2.0	20	0	10	0	3.0	5.0
MSHH130-1	PVYR	1	380	429	89	10	89	0	1	1.087	1.0	1.0	0	0	0	0	2.0	3.0
MN20TX015-001		1	379	409	93	7	93	0	0	1.081	1.0	0.0	0	20	10	0	2.0	5.0
MSHH206-11	PVYR	1	364	423	86	14	86	0	0	1.066	-	-	0	10	0	0	3.5	2.0
W19027-4		1	356	386	92	7	92	0	1	1.083	1.0	1.0	0	20	0	0	1.0	3.0
ND1852-10		1	347	393	88	9	88	0	2	1.088	2.0	0.0	0	10	0	0	2.0	3.0
MN20ND184Y-121		1	335	356	94	6	94	0	0	1.065	2.0	1.0	0	30	0	0	2.5	3.0
W19016-5		1	334	442	76	24	76	0	0	1.078	2.0	0.0	0	90	0	0	2.0	2.0
MSHH015-5	PVYR	1	316	339	93	7	93	0	0	1.088	1.0	0.0	0	30	0	0	1.0	3.0
MSHH043-10		1	306	340	90	10	87	3	0	1.089	1.0	1.0	0	20	0	10	2.0	5.0
Lamoka		**2**	**279**	**297**	**94**	**6**	**94**	**0**	**0**	**1.083**	**2.0**	**0.0**	**0**	**30**	**0**	**0**	**2.0**	**3.0**
MSHH056-19	PVYR	1	260	303	86	14	86	0	0	1.075	1.0	1.0	0	0	0	0	0.5	4.0
ND1848-1		1	257	282	91	9	91	0	0	1.068	2.0	1.0	10	50	0	0	1.5	2.0
W19013-4		1	254	283	90	10	90	0	0	1.085	1.0	1.0	10	0	10	0	0.5	5.0
W19024-18		1	250	310	81	19	81	0	0	1.087	1.0	1.0	0	40	0	0	3.0	2.0
MSHH137-1	PVYR	1	249	294	85	15	85	0	0	1.083	1.0	1.0	0	20	0	0	0.5	2.0
MN19AF6869-021		1	245	271	90	8	90	0	2	1.074	1.0	1.0	0	0	0	0	2.0	2.0
MSHH113-06	PVYR	1	245	306	80	20	80	0	0	1.080	1.0	1.0	0	0	0	0	1.0	3.0
MN20ND184Y-020		1	233	287	81	15	81	0	4	1.071	2.0	1.0	0	30	0	0	3.0	3.0
ND2032-2		1	227	276	82	18	82	0	0	1.071	1.0	1.0	0	0	0	0	3.0	3.0
ND20178-3		1	227	289	79	8	79	0	13	1.067	1.0	0.0	0	60	0	0	2.5	3.0
W19012-30		1	227	304	75	24	75	0	2	1.096	1.0	0.0	0	0	0	0	2.5	3.0
MN20ND184Y-120		1	225	276	82	15	82	0	3	1.064	-	-	0	0	0	0	2.5	3.0
Snowden		**2**	**217**	**303**	**72**	**28**	**72**	**0**	**0**	**1.081**	**1.0**	**1.0**	**0**	**70**	**0**	**0**	**3.0**	**1.0**
ND1853-24		1	191	241	79	17	79	0	4	1.089	2.0	2.0	0	50	0	0	1.0	3.0
MN20AF7131-002		1	189	302	63	27	63	0	11	1.079	1.0	1.0	0	0	20	0	3.0	3.0
W19012-12		1	175	306	57	43	57	0	0	1.094	2.0	0.0	0	0	0	0	1.0	3.0
W19028-23		1	163	185	88	12	88	0	0	1.098	1.0	1.0	0	20	0	0	1.0	5.0
MN19AF6866-004		1	162	240	68	25	68	0	7	1.075	1.0	2.0	0	30	10	0	2.0	3.0

LINE	PVY RESISTANT	N	CWT/A		PERCENT OF TOTAL[1]					SP GR	CHIP SCORE[2]	OTF SED[3]	PERCENT (%) TUBER QUALITY[4]				SCAB[5]	MAT[6]
			US#1	TOTAL	US#1	Bs	As	OV	PO				HH	VD	IBS	BC		
W19027-40		1	152	283	54	46	54	0	0	1.082	1.0	2.0	0	10	10	0	2.0	2.0
MN20ND1810Y-128		1	138	182	76	16	76	0	9	1.071	1.0	2.0	0	0	0	0	3.5	3.0
MSHH185-04	PVYR	1	133	160	83	17	83	0	0	1.069	-	-	0	0	0	0	2.0	3.0
MN18AF6648-010		1	114	247	46	54	46	0	0	1.076	1.0	1.0	0	0	0	0	2.0	3.0
W19018-3		1	114	171	67	28	67	0	6	1.078	1.0	0.0	10	0	0	0	2.5	2.0
ND1848-2		1	106	138	77	15	77	0	8	1.083	1.0	3.0	10	20	50	0	1.0	4.0
ND1846-6		1	88	132	67	33	67	0	0	1.077	1.0	2.0	0	30	0	0	3.5	3.0
MN20ND184Y-070		1	87	141	62	38	62	0	0	1.066	1.0	2.0	20	40	0	0	1.0	2.0
MN20W19027-074		1	69	126	55	45	55	0	0	1.071	1.0	1.0	0	20	0	0	1.0	1.0
MN20AF7145-002		1	62	144	43	43	43	0	14	1.065	1.0	0.0	0	30	10	0	2.0	1.0
W19012-9		1	48	81	59	41	59	0	0	1.073	1.0	1.0	0	30	0	0	4.5	2.0
ND2029-1		1	25	51	48	52	48	0	0	1.063	1.0	2.0	0	0	0	0	2.0	4.0
MEAN			275	327						1.079							2.1	3.1
Russet																		
W19036-5rus		1	375	507	74	17	74	0	9	1.083	-	-	0	20	10	0	3.0	4.0
W19035-17rus		1	373	436	85	10	85	0	5	1.072	-	-	10	0	0	0	2.5	2.0
MN20ND1833B-001		1	364	439	83	17	83	0	0	1.073	-	-	30	0	0	0	4.5	4.0
W19037-1rus		1	317	374	85	13	85	0	2	1.083	-	-	0	0	0	0	4.0	4.0
W19035-14rus		1	289	360	80	17	80	0	3	1.071	-	-	0	10	0	0	3.0	2.0
W19034-41rus		1	286	387	74	20	74	0	6	1.072	-	-	0	20	0	0	2.0	3.0
W19035-18rus		1	285	356	80	15	80	0	5	1.070	-	-	0	20	10	0	5.0	3.0
Gold Rush Russet		**2**	**274**	**331**	**83**	**13**	**83**	**0**	**4**	**1.063**	**-**	**-**	**0**	**20**	**0**	**0**	**0.5**	**1.0**
W19035-10rus		1	248	344	72	24	72	0	4	1.061	-	-	0	40	0	0	1.5	2.0
W19034-30rus		1	247	347	71	23	71	0	6	1.074	-	-	0	20	0	0	1.0	3.0
W19035-1rus		1	247	360	69	28	69	0	3	1.070	-	-	0	0	0	0	2.5	2.0
W19034-33rus		1	241	325	74	24	74	0	2	1.069	-	-	0	20	0	0	3.0	2.0
MN19AOR16034-002		1	232	336	69	24	69	0	7	1.072	-	-	0	0	0	0	2.0	2.0
W19037-11rus		1	206	353	59	35	59	0	6	1.068	-	-	0	0	0	0	1.0	2.0
MN20ND17105-001		1	195	337	58	42	58	0	0	1.079	1.0	1.0	10	10	0	0	1.0	2.0
W19039-6rus		1	189	235	80	20	80	0	0	1.065	-	-	0	0	0	0	0.5	2.0
Russet Norkotah		**2**	**187**	**292**	**64**	**27**	**64**	**0**	**9**	**1.071**	**-**	**-**	**20**	**0**	**0**	**0**	**3.0**	**3.0**
W19034-15rus		1	187	311	60	40	60	0	0	1.075	-	-	0	0	0	0	2.0	2.0
W19033-9rus		1	184	345	53	39	53	0	8	1.071	-	-	0	0	0	0	3.0	2.0
W19034-21rus		1	161	265	61	39	61	0	0	1.077	-	-	0	0	0	0	2.0	1.0
W19039-3Rus		1	150	178	84	16	84	0	0	1.057	-	-	0	10	0	0	1.5	1.0
MN20ND17100-001		1	137	220	62	28	62	0	10	1.070	-	-	0	20	0	0	4.0	4.0
W19038-3rus		1	102	168	60	36	60	0	4	1.073	-	-	0	50	0	0	1.5	2.0
ND195-3Russ		1	101	184	55	23	55	0	22	1.068	-	-	10	50	0	0	3.0	1.0
W19038-4rus		1	58	230	25	71	25	0	4	1.071	-	-	0	10	0	0	3.5	5.0
MN20CO17085-003		1	48	216	22	73	22	0	4	1.070	-	-	0	0	0	0	0.5	2.0
MEAN			219	317						1.071							2.3	2.4

LINE	PVY RESISTANT	N	CWT/A US#1	CWT/A TOTAL	PERCENT OF TOTAL[1] US#1	Bs	As	OV	PO	SP GR	CHIP SCORE[2]	OTF SED[3]	PERCENT (%) TUBER QUALITY[4] HH	VD	IBS	BC	SCAB[5]	MAT[6]
Red																		
MSHH157-4RR	PVYR	1	400	450	89	11	89	0	0	1.056	1.0	1.0	0	0	0	0	2.0	2.0
MN19ND1759-001		1	389	430	90	9	90	0	1	1.067	-	-	0	10	60	0	2.0	3.0
MSHH172-3PP	PVYR	1	382	417	92	8	92	0	0	1.068	2.0	1.0	0	0	0	0	2.0	2.0
MSHH160-05R	PVYR	1	377	411	92	8	92	0	0	1.086	-	-	0	0	0	0	2.5	5.0
MSHH149-17R	PVYR	1	357	395	90	10	90	0	0	1.071	-	-	0	0	0	0	2.5	4.0
MSHH155-6RY	PVYR	1	356	471	76	24	76	0	0	1.083	-	-	0	0	0	0	2.5	3.0
MSHH170-5RR	PVYR	1	332	428	78	22	78	0	1	1.069	3.0	2.0	0	0	0	0	1.0	3.0
MSHH164-03RY	PVYR	1	309	315	98	2	98	0	0	1.086	-	-	0	10	0	0	0.5	3.0
MSHH176-2R	PVYR	1	308	355	87	12	87	0	1	1.072	-	-	0	0	0	0	2.0	2.0
MSHH161-06R	PVYR	1	301	310	97	3	97	0	0	1.067	-	-	0	0	0	20	2.0	5.0
ND1870-3R		1	299	357	84	11	84	0	5	1.061	-	-	0	30	0	0	3.5	3.0
ND1940-1R		1	237	286	83	17	83	0	0	1.075	-	-	0	20	0	0	2.5	3.0
Dark Red Norland		**2**	**222**	**269**	**83**	**17**	**83**	**0**	**0**	**1.053**	-	-	**0**	**0**	**0**	**0**	**1.5**	**1.0**
ND1858Y-4R		1	218	284	77	23	77	0	0	1.069	-	-	30	50	10	0	3.0	2.0
MN19TX17751-005		1	208	238	88	12	88	0	1	1.077	2.0	2.0	0	20	0	0	2.0	2.0
ND1966-1pY		1	191	295	65	34	65	0	1	1.063	-	-	0	20	0	0	2.5	1.0
MSHH228-3PP	PVYR	1	176	196	90	10	90	0	0	1.063	2.0	2.0	0	0	0	0	2.0	5.0
MSHH161-04RY	PVYR	1	155	180	86	11	86	0	3	1.063	-	-	0	10	0	0	2.5	4.0
ND1979-1RR		1	145	166	88	12	88	0	0	1.066	1.0	1.0	0	0	10	0	3.0	2.0
MN19ND1759-002		1	134	194	69	24	69	0	7	1.059	-	-	0	0	0	0	1.5	2.0
ND1979-2Rp		1	115	197	58	42	58	0	0	1.068	-	-	0	0	0	0	3.5	3.0
ND2013-3R		1	106	123	86	9	86	0	5	1.060	-	-	0	0	0	0	3.0	1.0
ND2039-3R		1	93	132	70	30	70	0	0	1.060	-	-	10	0	0	0	3.5	1.0
ND2037-2R		1	88	106	83	17	83	0	0	1.058	-	-	0	10	0	0	1.0	2.0
ND2036-1R		1	77	261	30	70	30	0	0	1.054	-	-	0	0	0	0	2.5	1.0
ND1979-3Rp		1	73	146	50	46	50	0	4	1.068	2.0	1.0	0	50	0	0	3.0	2.0
ND1915-3R		1	67	71	93	7	93	0	0	1.068	-	-	0	10	0	0	4.0	2.0
ND1915-2R		1	66	140	47	8	47	0	44	1.072	-	-	0	0	0	0	4.0	3.0
MSHH180-04R		1	49	139	35	65	35	0	0	1.069	-	-	0	0	0	0	3.0	2.0
ND2037-3R		1	48	63	75	25	75	0	0	1.060	-	-	0	0	0	0	2.0	1.0
ND2056-11pY		1	37	100	37	63	37	0	0	1.045	-	-	0	0	0	0	3.5	1.0
ND2035-1R		1	27	99	27	55	27	0	18	1.056	-	-	0	20	0	0	3.0	1.0
ND1913-1R		1	24	50	47	53	47	0	0	1.071	-	-	0	0	0	0	1.5	1.0
MEAN			193	245						1.066							2.4	2.4

LINE	PVY RESISTANT	N	CWT/A US#1	CWT/A TOTAL	PERCENT OF TOTAL[1] US#1	Bs	As	OV	PO	SP GR	CHIP SCORE[2]	OTF SED[3]	PERCENT (%) TUBER QUALITY[4] HH	VD	IBS	BC	SCAB[5]	MAT[6]
Table/Speciality																		
MN20CO18192-001		1	449	544	83	15	83	0	2	1.084	2.0	1.0	10	10	0	0	3.5	4.0
MN19TX18280-002		1	434	490	89	10	89	0	2	1.077	3.0	3.0	10	0	0	0	4.0	4.0
MSHH179-04Y	PVYR	1	409	427	96	4	92	4	0	1.074	-	-	0	10	0	0	3.0	4.0
ND1837B-3Y		1	347	413	84	16	84	0	0	1.075	-	-	40	20	0	0	4.0	4.0
MSHH224-4Y	nd	1	300	424	71	28	71	0	1	1.058	-	-	0	0	0	0	1.5	3.0
ND1840B-1R		1	263	317	83	17	83	0	0	1.067	-	-	0	0	0	0	2.5	3.0
MN20TX478-001		1	258	278	93	7	91	1	0	1.058	-	-	0	0	0	0	4.0	2.0
MN20ND1824Y-001		1	247	269	92	8	92	0	0	1.063	-	-	0	30	10	0	2.5	3.0
Columba		**1**	**223**	**316**	**71**	**27**	**71**	**0**	**2**	**1.051**	-	-	**0**	**20**	**0**	**0**	**1.0**	**1.0**
MN19TX18171-003		1	216	254	85	10	85	0	5	1.072	1.0	1.0	0	20	0	0	1.0	3.0
MN190011-002		1	174	271	64	16	64	0	20	1.061	-	-	0	0	0	0	2.5	3.0
MN18W17026-004		1	29	142	20	37	20	0	42	1.060	-	-	0	0	0	0	2.0	1.0
MEAN			279	346						1.067							2.6	2.9

[1]SIZE: B: < 2 in.; A: 2-3.25 in.; OV: > 3.25 in.; PO: Pickouts.

[2]CHIP SCORE: SNAC Scale (Out of the field); Ratings: 1-5; 1: Excellent, 5: Poor.

[3]SED: Stem End Defect, Based on Paul Bethke's (USDA/UWisconsin - Madison) 0 - 5 scale. 0 = no SED; 3 = significant SED; 5 = severe SED

[4]QUALITY: HH: Hollow Heart; BC: Brown Center; VD: Vascular Discoloration; IBS: Internal Brown Spot. Percent of 10 Oversize and/or A-size tubers cut.

[5]MATURITY RATING: August 17, 2023; Ratings 1-5; 1: Early (vines completely dead); 5: Late (vigorous vine, some flowering).

[6]SCAB DISEASE RATING: MSU Scab Nursery; 0: No Infection; 1: Low Infection <5%; 3: Intermediate; 5: Highly Susceptible.

Plant Date: 5/9/23

Vine Kill: 8/30/23

Days from planting to vine kill: 113

Table 3

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

ADAPTATION TRIAL, TABLESTOCK LINES
MONTCALM RESEARCH CENTER
May 9 to September 12, 2023 (126 days)
DD Base 40°F 2935[7]

LINE	PVY RESISTANT	N	CWT/A		PERCENT OF TOTAL[1]					SP GR	PERCENT (%) TUBER QUALITY[2]				SCAB[3]	MAT[4]	BRUISE[5]	LB[6]
			US#1	TOTAL	US#1	Bs	As	OV	PO		HH	VD	IBS	BC				
MSCC282-2PP		2	690	733	94	5	92	3	1	1.071	0	0	0	0	1.8	4.0	-	-
MSFF353-1R		2	584	613	95	5	94	1	1	1.078	0	10	0	0	2.0	4.5	0.9	R
MSGG127-3R	PVYR	2	577	628	92	8	92	1	0	1.081	0	0	0	0	1.8	3.5	0.9	-
MSDD088-1		2	523	547	96	4	94	2	1	1.073	5	0	0	0	0.8	4.0	0.4	S
Blackberry		2	506	582	86	14	86	1	1	1.066	0	0	0	0	1.0	4.0	0.3	MS
MSGG039-08	PVYR	2	505	690	73	23	73	0	4	1.071	0	30	5	0	2.0	3.0	0.5	MS
MSGG135-1R	PVYR	2	478	660	73	27	72	1	1	1.076	0	0	0	0	1.0	3.5	0.4	MR
MSZ109-8PP		2	459	511	90	9	90	0	2	1.066	0	0	0	0	0.5	4.0	0.1	-
MSFF031-6	PVYR	2	454	482	94	6	94	0	0	1.067	0	0	0	0	0.8	3.5	1.6	MS
MSGG137-1R	PVYR	2	439	475	93	8	91	2	0	1.070	10	0	0	0	2.0	4.0	0.8	R
MSGG863-A2		2	436	471	93	6	90	3	2	1.086	5	5	0	10	1.0	4.0	-	-
Reba		**2**	**424**	**445**	**95**	**3**	**94**	**1**	**2**	**1.071**	**30**	**0**	**0**	**0**	**1.5**	**3.0**	**0.8**	**S**
MSFF182-1R	PVYR	2	416	523	80	21	80	0	0	1.086	35	0	0	5	0.8	4.0	0.9	R
MSCC553-1R	PVYR	2	407	454	90	7	90	0	4	1.074	0	0	0	0	1.0	4.0	0.1	MR
MSGG084-1	PVYR	2	397	436	91	8	91	0	1	1.070	5	35	0	0	1.0	3.0	0.5	MS
MSFF211-2	PVYR	2	392	444	88	4	87	2	8	1.064	0	15	0	20	1.8	4.0	-	R
MSFF120-2Y		2	388	421	92	8	91	2	1	1.070	0	0	5	0	1.3	3.0	0.8	S
MSFF335-2RR		2	379	445	85	15	85	0	1	1.066	0	5	0	0	0.5	5.0	1.9	MR
MSFF230-1		2	377	493	77	15	77	0	9	1.082	55	5	5	0	1.0	4.0	1.3	R
MSGG039-11	PVYR	2	374	436	86	9	84	2	7	1.071	0	0	0	0	1.3	3.0	0.3	MS
MSZ416-8RY		2	374	427	88	8	85	3	5	1.060	0	25	0	0	1.5	3.5	0.3	MS
Becca Rose		2	371	485	76	14	76	0	11	1.064	0	15	0	0	1.3	4.0	0.3	MS
MSAA182-3R		2	354	423	84	16	82	2	1	1.078	5	15	0	0	1.5	3.5	0.8	-
MSFF305-1RY	PVYR	2	348	403	86	14	86	0	0	1.071	0	15	0	0	1.3	5.0	0.2	R
MSAA101-01RR		2	347	395	88	12	88	0	0	1.077	30	10	0	0	0.5	3.0	1.2	S
MSAA174-1	PVYR	2	323	338	96	5	96	0	0	1.058	0	20	5	0	1.5	3.0	0.7	MR
Dark Red Norland		**2**	**321**	**356**	**90**	**9**	**87**	**3**	**2**	**1.057**	**10**	**0**	**5**	**5**	**1.5**	**3.0**	**0.3**	**S**
MSFF142-1P		2	318	420	76	25	76	0	0	1.071	0	5	0	0	1.3	5.0	0.3	MR
MSBB371-1YSPL		2	312	363	86	15	86	0	0	1.073	0	20	0	0	0.5	4.0	0.5	-
MSGG158-11PP	PVYR	2	281	383	74	26	74	0	1	1.062	0	0	0	0	1.0	3.5	-	-
Golden Globe		2	275	365	76	15	76	0	10	1.065	0	5	0	0	1.0	2.5	0.2	S
MSFF138-04R		2	264	303	87	12	84	3	1	1.077	0	5	5	0	1.5	4.0	1.8	R
MSFF134-1PP		2	263	318	83	12	83	0	6	1.070	0	0	0	0	1.5	3.5	-	MS
Yukon Gold		**2**	**253**	**287**	**88**	**12**	**88**	**0**	**1**	**1.071**	**40**	**10**	**5**	**10**	**2.0**	**2.5**	**0.9**	**S**

LINE	PVY RESISTANT	N	CWT/A		PERCENT OF TOTAL[1]					SP GR	PERCENT (%) TUBER QUALITY[2]				SCAB[3]	MAT[4]	BRUISE[5]	LB[6]
			US#1	TOTAL	US#1	Bs	As	OV	PO		HH	VD	IBS	BC				
Colomba		2	246	303	79	21	79	0	1	1.051	0	10	0	0	0.8	3.5	0.1	MS
Jacqueline Lee		2	243	401	61	39	61	0	1	1.079	0	0	0	0	2.3	3.5	1.3	S
MSFF230-2PY		2	213	271	79	17	79	0	5	1.080	5	10	0	0	1.3	5.0	0.5	R
MSFF145-2R		2	190	324	59	41	59	0	1	1.066	0	0	0	0	0.8	1.5	0.0	S
MEAN		2	381	449						1.071					1.2	3.6	0.7	

[1]SIZE: B: < 2 in.; A: 2-3.25 in.; OV: > 3.25 in.; PO: Pickouts.

[2]QUALITY: HH: Hollow Heart; BC: Brown Center; VD: Vascular Discoloration; IBS: Internal Brown Spot. Percent of 20 Oversize and/or A-size tubers cut.

[3]SCAB DISEASE RATING: MSU Scab Nursery; 0: No Infection; 1: Low Infection <5%; 3: Intermediate; 5: Highly Susceptible.

[4]MATURITY RATING: August 17, 2023; Ratings 1-5; 1: Early (vines completely dead); 5: Late (vigorous vine, some flowering).

[5]BRUISE: Simulated blackspot bruise test average number of spots per tuber.

[6]LB: Late blight (*P. infestans* US-23) foliar disease reaction. R=Resistant, MR=Moderate Resistance, MS=Moderate Susceptibility, S=Susceptible

Plant Date: 5/9/23

Vine Kill: 9/1/23

Days from planting to vine kill: 115

[7]Enviroweather: Entrican Station. Planting to vine kill

Table 4

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

PRELIMINARY TRIAL, CHIP-PROCESSING LINES
MONTCALM RESEARCH CENTER
May 9 to September 14, 2023 (128 days)
DD Base 40°F 2935[7]

													PERCENT (%) TUBER QUALITY[2]							
	PVY		CWT/A		PERCENT OF TOTAL[1]						OTF	OTF								
LINE	RESISTANT	N	US#1	TOTAL	US#1	Bs	As	OV	PO	SP GR	SFA	SED	HH	VD	IBS	BC	SCAB[3]	MAT[4]	BRUISE[5]	LB[6]
MSBB626-11	PVYR	1	604	629	96	4	93	3	0	nd	nd	nd	0	0	0	0	nd	4.0	nd	MR
MSGG302-1	PVYR	1	511	516	99	1	88	11	0	1.090	1.0	2.0	10	0	0	0	0.5	5.0	2.3	MR
MSGG190-1	PVYR	1	478	508	94	6	93	1	0	1.078	1.0	1.0	0	0	0	0	0.5	3.0	1.0	MS
MSDD084-19	PVYR	1	469	509	92	6	92	0	2	1.080	1.0	0.0	0	0	0	0	1.5	4.0	0.7	MR
Mackinaw	**PVYR**	**1**	**433**	**469**	**92**	**6**	**92**	**0**	**1**	**1.091**	**1.0**	**0.0**	**0**	**10**	**0**	**0**	**1.5**	**4.0**	**1.8**	**MR**
MSEE149-2		1	409	419	98	2	87	10	0	1.084	1.0	0.0	0	0	0	0	1.5	5.0	2.5	-
MSGG242-1	PVYR	1	407	472	86	14	86	0	0	1.088	1.0	0.0	0	0	50	10	0.5	4.0	2.0	MR
MSFF029-10	PVYR	1	396	468	85	15	85	0	0	1.087	1.0	1.0	0	0	10	10	1.5	3.0	0.2	-
MSFF022-2		1	376	407	92	8	92	0	0	1.076	1.0	2.0	0	0	0	0	1.5	3.0	0.8	MS
Mystere		1	350	439	80	20	80	0	1	1.076	1.0	0.0	0	10	0	0	2.0	3.0	0.7	S
MSDD050-B		1	340	376	91	8	84	6	2	1.069	2.0	2.0	0	0	0	0	0.5	3.0	1.0	MR
MSFF088-1		1	337	362	93	7	93	0	0	1.083	1.0	0.0	0	0	0	0	0.5	3.0	2.6	MR
MSFF035-2	PVYR	1	329	365	90	3	88	2	7	1.080	1.0	0.0	10	0	0	0	1.0	3.0	1.4	-
MSEE025-1	PVYR	1	304	307	99	1	99	0	0	1.077	1.0	1.0	0	0	0	0	0.5	3.0	0.1	MR
Petoskey		1	298	331	90	9	90	0	1	1.095	2.0	1.0	0	0	0	0	2.0	3.0	2.4	-
MSFF008-1		1	297	327	91	9	91	0	0	1.078	2.0	1.0	10	0	0	0	1.0	5.0	1.4	-
MSEE052-5		1	293	379	77	6	76	1	17	1.076	1.0	0.0	0	10	10	0	1.0	4.0	0.4	MR
MSEE149-1		1	230	237	97	3	95	2	0	1.079	3.0	2.0	0	0	0	0	0.5	5.0	2.4	-
MSFF191-1Y	PVYR	1	221	253	88	9	88	0	3	1.064	1.0	2.0	0	0	0	0	1.5	3.0	0.1	MR
Snowden		**1**	**204**	**271**	**75**	**24**	**75**	**0**	**1**	**1.085**	**1.0**	**0.0**	**0**	**0**	**0**	**0**	**2.5**	**2.0**	**1.7**	**MS**
MSGG169-2	PVYR	1	173	177	98	2	91	7	0	1.068	1.0	1.0	0	0	0	0	1.0	3.0	0.2	S
MSEE063-6	PVYR	1	158	172	92	7	92	0	1	1.080	1.0	2.0	20	10	0	0	1.0	5.0	1.0	R
Atlantic		**1**	**131**	**150**	**87**	**10**	**87**	**0**	**3**	**1.083**	**1.0**	**2.0**	**20**	**10**	**20**	**10**	**3.0**	**2.0**	**1.5**	**S**
MEAN			337	371						1.080							1.2	3.6	1.3	

[1]SIZE: B: < 2 in.; A: 2-3.25 in.; OV: > 3.25 in.; PO: Pickouts.

[2]QUALITY: HH: Hollow Heart; BC: Brown Center; VD: Vascular Discoloration; IBS: Internal Brown Spot. Percent of 10 Oversize and/or A-size tubers cut.

[3]SCAB DISEASE RATING: MSU Scab Nursery; 0: No Infection; 1: Low Infection <5%; 3: Intermediate; 5: Highly Susceptible.

[4]MATURITY RATING: August 17, 2023; Ratings 1-5; 1: Early (vines completely dead); 5: Late (vigorous vine, some flowering).

[5]BRUISE: Simulated blackspot bruise test average number of spots per tuber.

[6]LB: Late blight (*P. infestans* US-23) foliar disease reaction. R=Resistant, MR=Moderate Resistance, MS=Moderate Susceptibility, S=Susceptible

Plant Date: 5/9/23
Vine Kill: 9/1/23
Days from planting to vine kill: 115

[7]Enviroweather: Entrican Station. Planting to vine kill

Table 5

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

PRELIMINARY TRIAL, TABLESTOCK LINES
MONTCALM RESEARCH CENTER
May 9 to September 14, 2023 (128 days)
DD Base 40°F 2935[7]

LINE	PVY RESISTANT	N	CWT/A US#1	CWT/A TOTAL	PERCENT OF TOTAL[1] US#1	Bs	As	OV	PO	SP GR	PERCENT (%) TUBER QUALITY[2] HH	VD	IBS	BC	SCAB[3]	MAT[4]	BRUISE[5]	LB[6]
Allison		1	524	616	85	12	85	0	3	1.070	10	10	0	0	1.0	5.0	0.8	MS
MSFF301-3SPL		1	380	413	92	6	92	0	1	1.079	0	10	0	0	0.5	3.0	1.3	MR
MSFF149-01		1	321	357	90	7	90	0	4	1.081	0	30	0	0	1.0	3.0	1.5	MR
Sifra		1	278	398	70	30	70	0	1	1.061	0	20	10	0	3.0	2.0	0.2	MS
MSGG030-3Y		1	277	344	81	13	81	0	7	1.066	0	0	0	0	1.0	3.0	1.2	S
Jelly		1	270	297	91	6	91	0	3	1.074	20	50	0	0	1.0	4.0	0.4	MR
Spartan Splash		1	265	300	88	11	88	0	1	1.070	0	10	0	0	0.5	3.0	1.0	-
MSFF050-1		1	218	234	93	6	93	0	1	1.069	10	0	0	0	1.0	3.0	1.0	-
Dark Red Norland		**1**	**205**	**237**	**86**	**12**	**86**	**0**	**2**	**1.056**	**0**	**0**	**0**	**0**	**1.0**	**2.0**	**0.3**	**S**
MSAA127-01PP		1	200	252	79	19	79	0	2	1.059	0	0	0	0	0.5	4.0	0.9	MS
Camelia		1	184	244	75	19	75	0	6	1.060	0	20	0	0	2.0	2.0	0.2	MR
MEAN			284	336						1.068					1.1	3.1	0.8	

[1]SIZE: B: < 2 in.; A: 2-3.25 in.; OV: > 3.25 in.; PO: Pickouts.

[2]QUALITY: HH: Hollow Heart; BC: Brown Center; VD: Vascular Discoloration; IBS: Internal Brown Spot. Percent of 10 Oversize and/or A-size tubers cut.

[3]SCAB DISEASE RATING: MSU Scab Nursery; 0: No Infection; 1: Low Infection <5%; 3: Intermediate; 5: Highly Susceptible.

[4]MATURITY RATING: August 17, 2023; Ratings 1-5; 1: Early (vines completely dead); 5: Late (vigorous vine, some flowering).

[5]BRUISE: Simulated blackspot bruise test average number of spots per tuber.

[6]LB: Late blight (*P. infestans* US-23) foliar disease reaction. R=Resistant, MR=Moderate Resistance, MS=Moderate Susceptibility, S=Susceptible

Plant Date: 5/9/23
Vine Kill: 9/1/23
Days from planting to vine kill: 115

[7]Enviroweather: Entrican Station. Planting to vine kill

Table 6

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

PRELIMINARY TRIAL, PIGMENTED LINES
MONTCALM RESEARCH CENTER
May 9 to September 14, 2023 (128 days)
DD Base 40°F 2935[7]

LINE	PVY RESISTANT	N	CWT/A US#1	CWT/A TOTAL	PERCENT OF TOTAL[1] US#1	Bs	As	OV	PO	SP GR	PERCENT (%) TUBER QUALITY[2] HH	VD	IBS	BC	SCAB[3]	MAT[4]	Bruise[5]	LB[6]
MSGG102-1RR			382	452	85	14	85	0	2	1.070	0	0	0	0	2.5	3.0	ND	R
MSFF338-1PP			355	453	78	20	78	0	1	1.061	0	0	0	0	0.5	4.0	0.5	MS
MSFF335-3Pinto			258	510	51	44	51	0	6	1.064	0	0	0	0	0.5	4.0	0.4	MS
Dark Red Norland			**194**	**243**	**80**	**20**	**80**	**0**	**0**	**1.054**	**0**	**0**	**0**	**0**	**1.5**	**1.0**	**0.3**	**S**
W16025-5R			160	212	76	22	76	0	2	1.055	0	0	0	0	2.5	2.0	0.3	S
MSFF030-1WR	PVYR		144	225	64	26	64	0	10	1.060	0	0	0	0	0.5	3.0	0.7	MS
W17005-3R			111	149	74	21	74	0	4	1.059	0	0	10	10	2.0	3.0	0.0	S
W17026-4R			89	187	47	52	47	0	1	1.054	0	0	0	0	1.5	2.0	0.1	-
MSFF334-1Pinto			85	184	46	43	46	0	11	1.059	0	0	0	0	1.0	5.0	0.7	R
MEAN			198	291						1.060					1.4	3.0	0.4	

[1]SIZE: B: < 2 in.; A: 2-3.25 in.; OV: > 3.25 in.; PO: Pickouts.

[2]QUALITY: HH: Hollow Heart; BC: Brown Center; VD: Vascular Discoloration; IBS: Internal Brown Spot. Percent of 10 Oversize and/or A-size tubers cut.

[3]SCAB DISEASE RATING: MSU Scab Nursery; 0: No Infection; 1: Low Infection <5%; 3: Intermediate; 5: Highly Susceptible.

[4]MATURITY RATING: August 17, 2023; Ratings 1-5; 1: Early (vines completely dead); 5: Late (vigorous vine, some flowering).

[5]BRUISE: Simulated blackspot bruise test, average number of spots per tuber.

[6]LB: Late blight (*P. infestans* US-23) foliar disease reaction. R=Resistant, MR=Moderate Resistance, MS=Moderate Susceptibility, S=Susceptible

Plant Date: 5/9/23
Vine Kill: 9/1/23
Days from planting to vine kill: 115

[7]Enviroweather: Entrican Station. Planting to vine kill

Table 7

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

DIPLOID REPLICATED TRIAL
MONTCALM RESEARCH CENTER
May 8 to September 26, 2023 (141 days)
DD Base 40°F 2952[6]

		CWT/A		PERCENT OF TOTAL[1]						PERCENT (%) TUBER QUALITY[2]						
LINE	N	US#1	TOTAL	US#1	Bs	As	OV	PO	SP GR	HH	VD	IBS	BC	SCAB[3]	MAT[4]	BRUISE[5]
MSHH618-01	2	345	368	94	6	94	0	1	1.068	90	5	0	0	1.5	4.0	0.0
MSHH1043-02	2	317	384	83	16	83	0	3	1.077	30	5	0	0	0.8	4.5	2.4
MSHH693-01	2	244	334	73	28	73	0	0	1.088	0	0	0	0	-	3.5	1.3
MSII1591-3	2	215	235	92	9	92	0	0	1.096	100	0	0	0	-	4.0	3.2
Atlantic	**2**	**202**	**224**	**90**	**10**	**90**	**0**	**1**	**1.086**	**15**	**10**	**5**	**0**	**3.5**	**2.0**	**2.1**
MSII1117-1	2	192	253	76	24	76	0	1	1.084	0	0	20	0	-	3.0	3.5
Lamoka	**2**	**169**	**186**	**91**	**10**	**91**	**0**	**0**	**1.081**	**0**	**25**	**5**	**0**	**1.0**	**2.5**	**0.8**
MSGG691-06	2	168	267	64	31	64	0	6	1.072	50	0	10	0	2.5	4.0	2.9
MSHH664-01	2	133	193	68	29	68	0	4	1.074	50	5	0	0	2.3	4.5	3.8
MSII1081-2	2	128	171	75	21	75	0	5	1.083	35	0	0	0	0.8	2.0	3.3
MSHH699-02	2	114	233	49	50	49	0	1	1.092	0	0	0	0	-	4.0	1.5
MSFF690-01	2	102	175	58	42	58	0	1	1.081	40	20	5	0	1.5	3.0	2.1
MSII1591-2	2	91	126	72	24	72	0	5	1.099	10	5	0	0	1.8	3.0	1.7
MSGG655-01	2	65	95	70	31	70	0	0	1.084	0	0	0	0	-	3.0	1.9
MSHH1041-4	2	42	87	48	48	48	0	5	1.068	0	0	5	0	-	2.0	3.3
MEAN		168	222						1.082					1.7	3.3	2.3

[1]SIZE: B: < 2 in.; A: 2-3.25 in.; OV: > 3.25 in.; PO: Pickouts.

[2]QUALITY: HH: Hollow Heart; BC: Brown Center; VD: Vascular Discoloration; IBS: Internal Brown Spot. Percent of 20 Oversize and/or A-size tubers cut.

[3]SCAB DISEASE RATING: MSU Scab Nursery; 0: No Infection; 1: Low Infection <5%; 3: Intermediate; 5: Highly Susceptible.

[4]MATURITY RATING: August 17, 2023; Ratings 1-5; 1: Early (vines completely dead); 5: Late (vigorous vine, some flowering).

[5]BRUISE: Simulated blackspot bruise test, average number of spots per tuber.

[6]Enviroweather: Entrican Station. Planting to vine kill

Plant Date: 5/8/23
Vine Kill: 9/1/23
Days from planting to vine kill: 116

Table 8

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

2021-23 SCAB DISEASE TRIAL SUMMARY
SCAB NURSERY, MONTCALM RESEARCH CENTER , MI

LINE	3-YR* AVG.	2023 RATING	2023 WORST	2023 N	2022 RATING	2022 WORST	2022 N	2021 RATING	2021 WORST	2021 N
Sorted by ascending 2023 Average Rating;										
MSEE182-3	1.1	0.3	0.5	3	1.2	2.0	3	1.7	3.0	3
MSEE207-2	0.5	0.3	0.5	3	0.7	1.0	3	0.5	0.5	3
MSDD247-11	0.7	0.5	0.5	3	1.2	2.0	3	0.5	0.5	3
MSDD372-07	1.3	0.5	0.5	3	1.8	2.0	3	1.7	2.0	3
MSEE035-4	0.8	0.5	0.5	3	0.8	1.0	3	1.2	1.5	3
MSFF079-16	0.7*	0.5	1.0	3	0.8	1.0	3			
MSFF321-1		0.5	0.5	3						
MSGG242-1		0.5	0.5	3						
MSW474-1	0.7	0.5	0.5	3	1.0	1.5	3	0.5	0.5	3
Mackinaw[PVYR, LBR]	**1.4**	0.7	1.5	6	**1.8**	**2.5**	**6**	**1.8**	**2.5**	**3**
MSBB060-1		0.7	1.0	3						
MSBB614-15	0.6	0.7	1.0	3	0.7	1.0	3	0.3	0.5	3
MSBB636-11	0.9*	0.7	1.0	3	1.2	1.5	3			
MSDD050-B		0.7	1.0	3						
MSDD085-13	0.8	0.7	1.0	3	1.2	1.5	3	0.5	0.5	3
MSDD244-05	1.0	0.7	1.0	3	1.0	1.0	3	1.3	2.0	3
MSEE115-1	0.9*	0.7	1.0	3	1.2	1.5	3			
MSFF035-2	1.1	0.7	1.0	3	1.2	1.5	3	1.5	2.0	3
MSGG426-2		0.7	1.0	3						
MSZ109-8PP	0.9	0.7	1.0	3	0.8	1.0	3	1.3	1.5	3
MSEE149-1		0.8	1.0	2						
MSAA076-6	1.0	0.8	1.0	3	1.3	2.0	3	0.8	1.0	3
MSAA101-1RR	1.0	0.8	1.0	3	1.0	1.0	3	1.2	1.5	3
MSBB626-11	1.0	0.8	1.0	3	1.0	1.0	3	1.2	1.5	3
MSEE016-07	1.4	0.8	1.0	3	1.5	2.5	3	1.8	2.5	3
MSEE031-3	1.2	0.8	1.0	3	1.3	1.5	3	1.3	2.0	3
MSEE052-5		0.8	1.0	3						
MSEE149-2		0.8	1.5	3						
MSEE171-2		0.8	1.0	3						
MSFF050-1	1.3*	0.8	1.0	3	1.7	3.0	3			
MSFF088-1		0.8	1.0	3						
MSFF142-1P	1.1	0.8	1.0	3	0.8	1.0	3	1.5	2.0	3
MSFF145-2R		0.8	1.0	3						
MSFF182-1R	1.3*	0.8	1.5	3	1.7	2.0	3			
MSZ242-13	1.2	0.8	1.0	3	0.8	1.0	3	2.0	2.0	3
MSZ416-8RY		0.8	1.0	3						
Dark Red Norland	1.1	0.9	1.5	9	1.3	2.0	6	1.2	2.0	3
MSAA127-01PP		1.0	1.5	3						
MSAA217-3		1.0	1.5	3						
MSBB635-14	1.1	1.0	1.0	2	1.0	1.5	3	1.2	1.5	3
MSDD247-07	1.3	1.0	1.0	3	1.7	2.0	3	1.2	1.5	3
MSDD249-9	1.6	1.0	1.5	3	2.0	2.0	3	1.8	2.0	3
MSEE025-1		1.0	1.5	3						
MSEE063-6		1.0	1.5	3						
MSFF007-2	1.1*	1.0	1.5	3	1.2	1.5	3			
MSFF008-1		1.0	1.0	3						
MSFF031-6	1.1	1.0	1.5	3	1.3	1.5	3	1.0	1.5	3
MSFF138-04R		1.0	1.5	3						
MSGG302-1		1.0	1.5	2						
Blackberry	1.7	1.2	2.0	3	1.7	2.5	3	2.2	3.0	3

LINE	3-YR* AVG.	2023 RATING	2023 WORST	2023 N	2022 RATING	2022 WORST	2022 N	2021 RATING	2021 WORST	2021 N
Sorted by ascending 2023 Average Rating;										
MSAA174-1	1.6	1.2	2.0	3	1.7	2.0	3	1.8	2.5	3
MSBB371-1YSPL	1.2	1.2	2.0	3	1.2	2.0	3	1.3	2.0	3
MSBB610-13	1.5*	1.2	1.5	3	1.8	2.5	3			
MSBB630-2	1.3	1.2	1.5	3	1.0	1.5	3	1.7	2.0	3
MSDD039-01	1.4*	1.2	1.5	3	1.7	2.0	3			
MSDD244-15	1.0	1.2	2.0	3	1.0	1.5	3	0.8	1.0	3
MSFF211-2	1.2	1.2	1.5	3	1.2	1.5	3	1.3	1.5	3
MSFF335-2RR	1.2*	1.2	1.5	3	1.2	2.0	3			
MSGG084-1		1.2	1.5	3						
MSGG263-1		1.2	1.5	3						
MSGG349-3		1.2	1.5	3						
MSZ025-2		1.2	2.0	3						
MSBB058-1	1.2*	1.3	1.5	2	1.2	1.5	3			
MSBB058-3	1.4	1.3	1.5	2	1.2	1.5	3	1.7	2.0	3
Petoskey	1.4	1.3	1.5	6	1.7	2.0	3	1.3	2.0	6
Lamoka	**1.6**	1.3	1.5	3	**2.0**	**2.5**	**3**	**1.5**	**2.0**	**3**
MSDD042-01		1.3	2.0	3						
MSDD089-2	1.2*	1.3	2.5	3	1.0	1.5	3			
MSDD376-4	1.5	1.3	2.0	3	1.7	2.0	3	1.5	2.5	3
MSEE016-10	1.6	1.3	2.0	3	1.3	2.0	3	2.0	2.0	3
MSFF097-6	1.1*	1.3	2.0	3	0.8	1.5	3			
MSFF120-2Y	1.1	1.3	1.5	3	1.0	1.0	3	1.0	1.5	3
MSFF149-01		1.3	2.0	3						
MSFF301-3SPL		1.3	1.5	3						
MSFF305-1RY	1.4	1.3	2.0	3	1.3	1.5	3	1.7	2.0	3
MSDD088-1	1.3	1.5	2.0	3	0.8	1.0	3	1.7	2.0	3
MSFF022-2	1.4*	1.5	2.0	3	1.3	1.5	3			
MSFF334-1Pinto	1.1	1.5	2.0	3	1.2	1.5	3	0.7	1.0	3
MSGG158-11PP		1.5	3.0	3						
MSAA260-3	1.6	1.7	2.0	3	1.5	1.5	3	1.7	2.0	3
MSBB230-1		1.7	2.0	3						
MSFF036-1	2*	1.7	2.0	3	2.3	3.0	3			
MSFF037-17	1.8*	1.7	2.0	3	2.0	2.0	3			
MSFF038-3	1.8*	1.7	2.5	3	1.8	2.0	3			
MSFF077-4		1.7	2.0	3						
MSFF134-1PP	1.6	1.7	2.5	3	1.3	1.5	3	1.8	2.0	3
MSFF292-1	1.4*	1.7	2.0	3	1.2	2.0	3			
MSGG195-1		1.7	3.0	3						
MSGG409-3		1.7	2.5	3						
NY163	1.8*	1.7	2.0	3	2.0	2.5	3			
Spartan Splash	2*	1.7	2.5	3	2.3	2.5	3			
W17005-3R		1.7	2.0	3						
MSGG135-1R		1.8	2.0	2						
Colomba		1.8	3.0	3						
FL2137		1.8	2.5	3						
MSAA182-3R	1.4*	1.8	2.5	3	1.0	1.5	3			
MSDD553-1	1.9	1.8	2.0	3	1.8	2.0	3	2.2	2.5	3
MSFF030-1WR		1.8	2.0	3						
MSFF335-3Pinto	2.3*	1.8	2.5	3	2.8	3.5	3			
MSFF338-1PP	2.1*	1.8	2.5	3	2.3	3.0	3			
MSGG863-A2		1.8	3.0	3						
MSFF029-10	2.2	2.0	2.0	3	2.7	3.0	3	1.8	2.0	3
MSGG030-3Y		2.0	3.0	3						
Reba	2.2	2.0	2.5	3	2.5	3.0	3	2.2	2.5	3

LINE	3-YR* AVG.	2023 RATING	2023 WORST	2023 N	2022 RATING	2022 WORST	2022 N	2021 RATING	2021 WORST	2021 N
Sorted by ascending 2023 Average Rating;										
Allison		2.2	2.5	3						
Becca Rose		2.2	2.5	3						
Jelly		2.2	2.5	3						
MSCC553-1R	1.9	2.2	2.5	3	1.2	1.5	3	2.5	3.0	3
MSDD084-19	1.8*	2.2	2.5	3	1.3	1.5	3			
MSFF191-1Y		2.2	3.0	3						
MSGG194-3		2.2	2.5	3						
MSGG169-2		2.3	3.0	3						
Manistee	2.7	2.5	3.0	3	2.8	3.5	3	2.8	3.0	3
MSAA240-5		2.5	3.0	3						
MSCC282-2PP	2.3*	2.5	3.0	3	2.2	2.5	3			
MSFF230-2PY		2.5	3.0	3						
MSGG039-11		2.5	3.0	3						
MSGG190-1		2.5	3.0	3						
Mystere		2.5	2.5	3						
W16025-5R		2.5	3.0	3						
W17026-4R		2.5	2.5	3						
Atlantic	2.8	2.6	3.0	6	3.1	3.5	6	2.8	3.5	3
Golden Globe		2.7	3.5	3						
Jacqueline Lee	2.8*	2.7	3.5	3	2.8	3.5	3			
MSGG137-1R		2.7	3.5	3						
Yukon Gold	2.4	2.7	3.0	3	2.7	3.0	3	1.8	2.5	3
MSFF230-1		2.8	3.0	3						
Sifra		2.8	3.5	3						
Camelia		3.0	3.5	3						
MSGG039-08		3.0	3.5	3						
MSGG127-3R		3.0	3.5	3						
Snowden	3.1	3.0	3.5	6	3.3	3.5	6	3.0	3.5	3
MSFF353-1R	2.6*	3.2	3.5	3	2.0	2.5	3			
MSGG102-1RR		3.8	4.0	3						

$HSD_{0.05}$ =

SCAB DISEASE RATING: MSU Scab Nursery plot rating of 0-5; 0: No Infection; 1: Low Infection <5%, no pitted leisions; 3: Intermediate >20%, some pitted leisions (Susceptible, as commonly seen on Atlantic); 5: Highly Susceptible, >75% coverage and severe pitted leisions.

N = Number of replications.

*2-Year Average.

Table 9

MICHIGAN STATE UNIVERSITY

POTATO BREEDING and GENETICS

2023 SCAB DISEASE EARLY GENERATION TRIAL SUMMARY
SCAB NURSERY, MONTCALM RESEARCH CENTER, MI

LINE	2023 RATING	2023 N	LINE	2023 RATING	2023 N
Sorted by ascending 2023 Rating:					
MSII1593-2	0.0	1	MSII147-9	0.5	1
MSFF725-3	0.5	1	MSII150-3	0.5	1
MSHH015-5	0.5	1	MSII154-1	0.5	1
MSHH034-12	0.5	1	MSII168-1	0.5	1
MSHH043-03	0.5	1	MSII172-3	0.5	1
MSHH043-10	0.5	1	MSII195-1	0.5	1
MSHH046-1	0.5	1	MSII199-2	0.5	1
MSHH053-19	0.5	1	MSII210-6	0.5	1
MSHH069-3	0.5	1	MSII211-3	0.5	1
MSHH091-03	0.5	1	MSII212-1	0.5	1
MSHH119-1	0.5	1	MSII214-1	0.5	1
MSHH134-20	0.5	2	MSII224-1	0.5	1
MSHH137-1	0.5	1	MSII243-2	0.5	1
MSHH170-5RR	0.5	1	MSII311-1Y	0.5	1
MSHH600-A2	0.5	1	MSII400-1RR	0.5	1
MSHH601-A2	0.5	1	MSII415-1R	0.5	1
MSHH1042-A1	0.5	1	MSII416-6R	0.5	1
MSHH1042-A2	0.5	1	MSII423-06R	0.5	1
MSII046-7	0.5	1	MSII1022-1	0.5	1
MSII049-1	0.5	1	MSII1051-4	0.5	1
MSII050-3	0.5	1	MSII1054-2	0.5	1
MSII050-4	0.5	1	MSII1075-1	0.5	1
MSII052-2	0.5	1	MSII1189-1	0.5	1
MSII057-2	0.5	1	MSII1592-2Y	0.5	1
MSII063-2	0.5	1	MSII1593-1RY	0.5	1
MSII075-1	0.5	1	MSII1594-1Y	0.5	1
MSII090-4	0.5	1	MSII1598-1Y	0.5	1
MSII093-1	0.5	1	MSII1606-1	0.5	1
MSII098-1	0.5	1	MSII1631-1	0.5	1
MSII105-1	0.5	1	WI3-6	0.5	1
MSII107-1	0.5	1	MSHH056-03	0.8	2
MSII108-6	0.5	1	MSHH004-2	1.0	1
MSII112-3	0.5	1	MSHH053-04	1.0	1
MSII117-15	0.5	1	MSHH066-6	1.0	1
MSII120-4	0.5	1	MSHH113-06	1.0	1
MSII128-1	0.5	1	MSHH172-3PP	1.0	1
MSII133-1	0.5	1	MSHH224-4Y	1.0	1
MSII133-2	0.5	1	MSHH606-A2	1.0	1
MSII142-1	0.5	1	MSHH970-A1	1.0	1
MSII146-1	0.5	1	MSHH1500-A7	1.0	1
MSII147-3	0.5	1	MSII040-1	1.0	1

LINE	2023 RATING	2023 N	LINE	2023 RATING	2023 N
Sorted by ascending 2023 Rating:					
MSII052-1	1.0	1	MSII1653-1	1.0	1
MSII067-1	1.0	1	MSHH018-4	1.5	1
MSII076-1	1.0	1	MSHH185-4	1.5	1
MSII090-2	1.0	1	MSHH796-A2	1.5	1
MSII107-5	1.0	1	MSII042-1	1.5	1
MSII117-1	1.0	1	MSII042-2	1.5	1
MSII117-10	1.0	1	MSII046-1	1.5	1
MSII117-12	1.0	1	MSII078-10	1.5	1
MSII117-13	1.0	1	MSII081-1	1.5	1
MSII119-2	1.0	1	MSII084-1	1.5	1
MSII126-4	1.0	1	MSII107-7	1.5	1
MSII135-1	1.0	1	MSII108-4	1.5	1
MSII147-8	1.0	1	MSII115-2	1.5	1
MSII169-1	1.0	1	MSII120-5	1.5	1
MSII171-1	1.0	1	MSII122-2	1.5	1
MSII184-1	1.0	1	MSII128-4	1.5	1
MSII186-2	1.0	1	MSII132-1	1.5	1
MSII190-1	1.0	1	MSII134-1	1.5	1
MSII210-2	1.0	1	MSII135-2	1.5	1
MSII212-2	1.0	1	MSII149-1	1.5	1
MSII213-1	1.0	1	MSII164-1	1.5	1
MSII214-2	1.0	1	MSII177-1	1.5	1
MSII226-1	1.0	1	MSII186-1	1.5	1
MSII227-1	1.0	1	MSII198-1	1.5	1
MSII233-1	1.0	1	MSII231-1	1.5	1
MSII233-2	1.0	1	MSII233-3	1.5	1
MSII239-1	1.0	1	MSII238-1	1.5	1
MSII241-1	1.0	1	MSII243-1	1.5	1
MSII241-2	1.0	1	MSII301-4	1.5	1
MSII242-1	1.0	1	MSII306-5Y	1.5	1
MSII325-1Y	1.0	1	MSII344-4Y	1.5	1
MSII328-6Y	1.0	1	MSII353-1Y	1.5	1
MSII336-2	1.0	1	MSII409-05R	1.5	1
MSII338-1Y	1.0	1	MSII418-03R	1.5	1
MSII339-1Y	1.0	1	MSII418-10	1.5	1
MSII413-2R	1.0	1	MSII419-10	1.5	1
MSII415-2P	1.0	1	MSII1505-1	1.5	1
MSII416-2RR	1.0	1	MSII1518-1	1.5	1
MSII432-2R	1.0	1	MSII1519-1	1.5	1
MSII1054-1	1.0	1	MSII1604-1	1.5	1
MSII1073-1	1.0	1	ND2-7	1.5	1
MSII1148-1	1.0	1	WI1-16	1.5	1
MSII1151-1	1.0	1	MI2-24	2.0	1
MSII1172-1	1.0	1	MSBB764-1	2.0	1
MSII1198-1	1.0	1	MSBB791-1	2.0	1

LINE	2023 RATING	2023 N	LINE	2023 RATING	2023 N
Sorted by ascending 2023 Rating:					
MSBB829-1	2.0	1	MSII163-1	2.5	1
MSEE824-04	2.0	1	MSII176-3	2.5	1
MSHH018-3	2.0	1	MSII305-1	2.5	1
MSHH063-2	2.0	1	MSII309-2Y	2.5	1
MSHH064-2	2.0	1	MSII311-5Y	2.5	1
MSHH157-4RR	2.0	1	MSII326-1	2.5	1
MSHH614-A4	2.0	1	MSII353-2Y	2.5	1
MSHH685-A1	2.0	1	MSII1201-1	2.5	1
MSHH685-A6	2.0	1	MSII1503-2RP	2.5	1
MSHH1040-A4	2.0	1	MSII1505-2	2.5	1
MSHH1040-A5	2.0	1	MSII1512-1	2.5	1
MSII039-1	2.0	1	ND1-3	2.5	1
MSII050-1	2.0	1	MSHH130-1	3.0	1
MSII060-5	2.0	1	MSHH206-11	3.0	1
MSII091-1	2.0	1	MSHH228-3PP	3.0	1
MSII106-1	2.0	1	MSHH614-A5	3.0	1
MSII122-4	2.0	1	MSHH614-A6	3.0	1
MSII129-1	2.0	1	MSHH614-A7	3.0	1
MSII311-4Y	2.0	1	MSHH710-A2	3.0	1
MSII323-5Y	2.0	1	MSHH970-A6	3.0	1
MSII414-2PP	2.0	1	MSII088-1	3.0	1
MSII414-6PP	2.0	1	MSII125-1	3.0	1
MSII415-3R	2.0	1	MSII155-1	3.0	1
MSII418-04R	2.0	1	MSII160-1	3.0	1
MSII418-07R	2.0	1	MSII225-1	3.0	1
MSII419-07R	2.0	1	MSII237-1	3.0	1
MSII432-7R	2.0	1	MSII1046-01	3.0	1
MSII445-1	2.0	1	MSII1167-1	3.0	1
MSII1001-1	2.0	1	MSII1503-1PP	3.0	1
MSII1044-1	2.0	1	MSII076-2	3.5	1
MSII1111-1	2.0	1	MSII102-1	3.5	1
MSII1511-1PP	2.0	1	MSII132-2	3.5	1
MSII1594-3Y	2.0	1	MSII1199-1	3.5	1
MSII1659-1	2.0	1	MSII1505-3	3.0	1
MSHH068-10	2.5	1	MI2-20	3.5	1
MSHH614-A1	2.5	1	MSGG563-A4	3.5	1
MSHH1040-A6	2.5	1	MSHH048-4	3.5	1
MSII046-8	2.5	1	MSII327-1Y	3.5	1
MSII048-1	2.5	1	MSII336-1	3.5	1
MSII126-1	2.5	1			
MSII143-1	2.5	1			

Table 10

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

2023 MSU LATE BLIGHT VARIETY TRIAL
PLANT PATHOLOGY FARM, LANSING, MI

Line Sort:

LINE	N	RAUDPC[1] MEAN	LB RESISTANCE[2]
Allison	3	6.6	MS
Atlantic Guard	**45**	**13.9**	**S**
Atlantic	**3**	**12.3**	**S**
Becca Rose	3	8.4	MS
Camelia	3	4.2	MR
Colomba	3	10.7	MS
COTX08063-2Ru	2	10.7	MS
COTX10080-2Ru	3	9.4	MS
Dark Red Norland	**6**	**24.0**	**S**
Golden Globe	1	13.4	S
Jacqueline Lee	**2**	**12.7**	**S**
Jelly	3	5.1	MR
Mackinaw	**6**	**6.2**	**MR**
MSAA101-01RR	3	12.3	S
MSAA127-01PP	3	10.2	MS
MSAA174-1	3	4.1	MR
MSAA240-5	3	7.0	MS
MSAA260-3	3	9.4	MS
MSBB351-1	3	11.2	MS
MSBB614-15	3	0.7	R
MSBB626-11	3	5.7	MR
MSBB636-11	3	6.9	MS
MSCC553-1R	3	4.4	MR
MSCC725-232	3	9.7	MS
MSDD050-B	3	5.0	MR
MSDD084-19	3	3.3	MR
MSDD088-1	3	15.8	S
MSDD244-05	3	7.6	MS
MSDD244-15	3	0.5	R
MSDD247-07	3	5.9	MR
MSDD247-11	3	5.3	MR
MSDD249-9	3	3.6	MR
MSDD370-2	3	4.5	MR
MSDD372-07	3	0.6	R
MSDD483-1	3	10.6	MS
MSDD553-1	3	5.6	MR
MSEE025-1	3	4.4	MR
MSEE031-3	3	5.9	MR
MSEE035-4	3	2.7	R
MSEE048-2Y	3	0.1	R
MSEE052-5	3	5.8	MR
MSEE063-6	3	1.5	R
MSEE180-3P	3	3.5	MR
MSEE182-3	3	6.5	MS
MSEE191-3Y	2	3.2	MR
MSEE207-2	3	4.3	MR
MSFF007-2	3	7.6	MS
MSFF022-2	3	7.8	MS
MSFF030-1WR	3	8.0	MS
MSFF031-3SPL	2	3.9	MR
MSFF031-6	3	6.5	MS

RAUDPC Sort:

LINE	N	RAUDPC[1] MEAN	LB RESISTANCE[2]
MSFF230-2PY	3	0.1	R
MSEE048-2Y	3	0.1	R
MSFF334-1Pinto	3	0.3	R
MSFF072-1Y	3	0.4	R
MSDD244-15	3	0.5	R
MSDD372-07	3	0.6	R
MSFF305-1RY	3	0.6	R
MSBB614-15	3	0.7	R
MSFF182-1R	3	0.7	R
MSFF353-1R	3	1.4	R
MSEE063-6	3	1.5	R
MSFF230-1	3	2.1	R
MSGG137-1R	2	2.4	R
MSFF138-04R	3	2.5	R
MSGG102-1RR	3	2.5	R
MSFF211-2	3	2.6	R
MSEE035-4	3	2.7	R
MSEE191-3Y	2	3.2	MR
MSDD084-19	3	3.3	MR
MSFF149-01	3	3.5	MR
MSEE180-3P	3	3.5	MR
MSDD249-9	3	3.6	MR
MSZ219-13	3	3.6	MR
MSFF097-6	3	3.7	MR
MSFF079-16	3	3.8	MR
MSFF031-3SPL	2	3.9	MR
MSFF191-1Y	3	4.1	MR
MSAA174-1	3	4.1	MR
MSGG242-1	3	4.1	MR
Camelia	3	4.2	MR
MSEE207-2	3	4.3	MR
MSCC553-1R	3	4.4	MR
MSEE025-1	3	4.4	MR
MSDD370-2	3	4.5	MR
MSFF088-1	3	4.6	MR
MSFF301-3SPL	3	4.6	MR
MSFF335-2RR	3	4.8	MR
MSGG349-3	3	5.0	MR
MSDD050-B	3	5.0	MR
MSGG426-2	3	5.1	MR
Jelly	3	5.1	MR
MSFF142-1P	3	5.2	MR
MSDD247-11	3	5.3	MR
MSGG302-1	3	5.5	MR
MSDD553-1	3	5.6	MR
MSBB626-11	3	5.7	MR
MSEE052-5	3	5.8	MR
MSGG409-3	4	5.9	MR
MSDD247-07	3	5.9	MR
MSEE031-3	3	5.9	MR
MSGG135-1R	3	6.0	MR

Line Sort:

LINE	N	RAUDPC[1] MEAN	LB RESISTANCE[2]
MSFF034-4P	3	11.5	MS
MSFF037-17	3	7.5	MS
MSFF038-3	3	10.7	MS
MSFF072-1Y	3	0.4	R
MSFF077-4	3	11.0	MS
MSFF079-16	3	3.8	MR
MSFF088-1	3	4.6	MR
MSFF097-6	3	3.7	MR
MSFF120-2Y	3	13.3	S
MSFF134-1PP	3	11.2	MS
MSFF138-04R	3	2.5	R
MSFF142-1P	3	5.2	MR
MSFF145-2R	2	23.2	S
MSFF149-01	3	3.5	MR
MSFF182-1R	3	0.7	R
MSFF191-1Y	3	4.1	MR
MSFF206-1	3	6.1	MR
MSFF211-2	3	2.6	R
MSFF230-1	3	2.1	R
MSFF230-2PY	3	0.1	R
MSFF301-3SPL	3	4.6	MR
MSFF305-1RY	3	0.6	R
MSFF321-1	3	8.8	MS
MSFF334-1Pinto	3	0.3	R
MSFF335-2RR	3	4.8	MR
MSFF335-3Pinto	3	6.9	MS
MSFF338-1PP	3	7.7	MS
MSFF353-1R	3	1.4	R
MSGG030-3Y	3	14.6	S
MSGG039-08	3	8.7	MS
MSGG039-11	2	7.1	MS
MSGG084-1	3	7.3	MS
MSGG102-1RR	3	2.5	R
MSGG135-1R	3	6.0	MR
MSGG137-1R	2	2.4	R
MSGG169-2	3	15.2	S
MSGG190-1	3	10.2	MS
MSGG242-1	3	4.1	MR
MSGG263-1	3	8.4	MS
MSGG302-1	3	5.5	MR
MSGG349-3	3	5.0	MR
MSGG409-3	4	5.9	MR
MSGG426-2	3	5.1	MR
MSW474-1	3	9.3	MS
MSZ219-13	3	3.6	MR
MSZ242-13	3	10.2	MS
MSZ416-8RY	3	9.2	MS
MSZ513-2	3	13.6	S
MSZ598-2	3	12.8	S
Mystere	3	14.5	S
NY163	3	14.2	S
Reba	**3**	**13.8**	**S**
Sifra	3	9.8	MS
Snowden	**3**	**6.8**	**MS**

RAUDPC Sort:

LINE	N	RAUDPC[1] MEAN	LB RESISTANCE[2]
MSFF206-1	3	6.1	MR
Mackinaw	**6**	**6.2**	**MR**
MSEE182-3	3	6.5	MS
MSFF031-6	3	6.5	MS
Allison	3	6.6	MS
Snowden	**3**	**6.8**	**MS**
MSFF335-3Pinto	3	6.9	MS
MSBB636-11	3	6.9	MS
MSAA240-5	3	7.0	MS
MSGG039-11	2	7.1	MS
MSGG084-1	3	7.3	MS
MSFF037-17	3	7.5	MS
MSDD244-05	3	7.6	MS
MSFF007-2	3	7.6	MS
MSFF338-1PP	3	7.7	MS
MSFF022-2	3	7.8	MS
MSFF030-1WR	3	8.0	MS
Becca Rose	3	8.4	MS
MSGG263-1	3	8.4	MS
MSGG039-08	3	8.7	MS
MSFF321-1	3	8.8	MS
MSZ416-8RY	3	9.2	MS
MSW474-1	3	9.3	MS
MSAA260-3	3	9.4	MS
COTX10080-2Ru	3	9.4	MS
MSCC725-232	3	9.7	MS
Sifra	3	9.8	MS
MSGG190-1	3	10.2	MS
MSZ242-13	3	10.2	MS
MSAA127-01PP	3	10.2	MS
MSDD483-1	3	10.6	MS
Colomba	3	10.7	MS
COTX08063-2Ru	2	10.7	MS
MSFF038-3	3	10.7	MS
MSFF077-4	3	11.0	MS
MSBB351-1	3	11.2	MS
MSFF134-1PP	3	11.2	MS
MSFF034-4P	3	11.5	MS
MSAA101-01RR	3	12.3	S
Atlantic	**3**	**12.3**	**S**
Jacqueline Lee	**2**	**12.7**	**S**
MSZ598-2	3	12.8	S
MSFF120-2Y	3	13.3	S
Golden Globe	1	13.4	S
MSZ513-2	3	13.6	S
Reba	**3**	**13.8**	**S**
Atlantic Guard	**45**	**13.9**	**S**
NY163	3	14.2	S
Mystere	3	14.5	S
MSGG030-3Y	3	14.6	S
W16025-5R	2	14.9	S
MSGG169-2	3	15.2	S
W17005-3R	3	15.5	S
MSDD088-1	3	15.8	S

Line Sort: ***RAUDPC Sort:***

LINE	N	RAUDPC[1] MEAN	LB RESISTANCE[2]	LINE	N	RAUDPC[1] MEAN	LB RESISTANCE[2]
W16025-5R	2	14.9	S	MSFF145-2R	2	23.2	S
W17005-3R	3	15.5	S	**Dark Red Norland**	**6**	**24.0**	**S**

[1]Ratings indicate the average plot RAUDPC (Relative Area Under the Disease Progress Curve).

[2]LB Resistance: R=Resistant, MR=Moderate Resistance, MS=Moderate Susceptibility, S=Susceptible

LB Isolate used: US-23

Table 11

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

2023 MSU LATE BLIGHT EARLY GENERATION TRIAL
PATHOLOGY FARM EAST, LANSING, MI

LINE	RAUDPC[1] MEAN	LB RESISTANCE[2]	N	LINE	RAUDPC[1] MEAN	LB RESISTANCE[2]	N
Sorted by ascending 2023 RAUDPC							
MSFF230-2PY	0.1	R	1	MSHH113-06	7.9	MS	1
MSII414-6PP	0.2	R	1	MSHH137-1	7.9	MS	1
MSSFF230-1	0.4	R	1	MSII199-2	7.9	MS	1
MSII233-2	0.5	R	1	MSII212-2	7.9	MS	1
MI2-20	0.6	R	1	MSII416-6R	7.9	MS	1
MSHH056-19	0.6	R	1	WI1-16	7.9	MS	1
MSII414-2PP	0.6	R	1	ND2-7	8.2	MS	1
MSII416-2RR	0.6	R	1	MSII106-1	8.3	MS	1
MSII186-2	1.3	R	1	MSII076-2	8.4	MS	1
MSII120-5	1.4	R	1	MSHH048-4	8.6	MS	1
MSHH043-03	1.4	R	1	MSII135-2	8.7	MS	1
MSHH053-04	1.9	R	1	MSII120-4	8.8	MS	1
MSHH134-20	1.9	R	2	MSII125-1	9.0	MS	1
MSII149-1	2.1	R	1	MSII060-5	9.1	MS	1
MSII305-1	2.2	R	1	MSII042-1	9.3	MS	1
MSII198-1	2.4	R	1	MSII093-1	10.0	MS	1
MSII233-1	2.5	R	1	MSII112-3	10.0	MS	1
MSII306-5Y	2.5	R	1	MSII212-1	10.0	MS	1
MSII147-9	2.6	R	1	MSII226-1	10.1	MS	1
MSII147-8	2.8	R	1	MSII186-1	10.4	MS	1
MSHH056-03	2.9	R	2	MSII119-2	10.4	MS	1
MSHH004-2	3.9	MR	1	MSHH206-11	10.7	MS	1
MSII213-1	3.9	MR	1	MSII042-2	10.7	MS	1
MSHH018-3	4.3	MR	1	MSII076-1	10.7	MS	1
MSHH063-2	4.3	MR	1	MSHH224-4Y	10.9	MS	1
MSHH069-3	4.3	MR	1	MSII231-1	11.1	MS	1
MSII233-3	4.4	MR	1	MSHH119-1	11.4	MS	1
MI2-24	4.7	MR	1	MSII338-1Y	11.4	MS	1
MSHH018-4	4.7	MR	1	MSII184-1	12.1	S	1
MSII150-3	4.7	MR	1	MSII445-1	12.4	S	1
MSII242-1	4.7	MR	1	**Atlantic Guard**	**12.5**	**S**	**15**
MSII126-4	5.0	MR	1	MSII126-1	12.9	S	1
MSII057-2	5.1	MR	1	ND1-3	13.1	S	1
MSHH043-10	5.4	MR	1	MSII040-1	13.6	S	1
MSHH015-5	5.4	MR	1	MSII301-4	15.0	S	1
MSII237-1	5.4	MR	1	WI3-6	15.4	S	1
MSII147-3	6.0	MR	1	MSII309-2Y	16.4	S	1
MSHH053-19	6.1	MR	1				
MSII049-1	6.1	MR	1				
MSHH066-6	7.1	MS	1				
MSHH091-03	7.1	MS	1				
MSHH130-1	7.3	MS	1				
MSII176-3	7.3	MS	1				
MSII135-1	7.4	MS	1				
MSHH185-4	7.4	MS	1				
MSII115-2	7.5	MS	1				
MSII328-6Y	7.5	MS	1				
MSII048-1	7.6	MS	1				
MSII105-1	7.6	MS	1				
MSII134-1	7.6	MS	1				

[1]Ratings indicate the average plot RAUDPC (Relative Area Under the Disease Progress Curve).

[2]LB Resistance: R=Resistant, MR=Moderate Resistance, MS=Moderate Susceptibility, S=Susceptible

Table 12

MICHIGAN STATE UNIVERSITY
POTATO BREEDING and GENETICS

2023 BLACKSPOT BRUISE SUSCEPTIBILITY TEST
SIMULATED BRUISE SAMPLES*

ENTRY	SP GR	NUMBER OF SPOTS PER TUBER						PERCENT (%) BRUISE FREE	AVERAGE SPOTS/TUBER
		0	1	2	3	4	5+		
ADAPTATION TRIAL, CHIP-PROCESSING LINES									
NY163	1.083	21	4	0	0	0	0	84	0.2
MSGG426-2	1.080	19	6	0	0	0	0	76	0.2
MSBB636-11	1.075	19	4	2	0	0	0	76	**0.3**
MSDD042-01	1.074	15	10	0	0	0	0	60	**0.4**
MSDD089-2	1.078	16	7	2	0	0	0	64	**0.4**
MSGG349-3	1.070	13	7	3	0	0	0	57	0.6
MSEE182-3	1.077	11	11	3	0	0	0	44	0.7
MSFF077-4	1.078	11	10	4	0	0	0	44	0.7
MSZ025-2	1.076	12	7	3	0	1	0	52	0.7
MSAA260-3	1.084	11	8	4	1	0	0	46	**0.8**
Atlantic	**1.081**	**11**	**9**	**4**	**1**	**0**	**0**	**44**	**0.8**
FL2137	**1.080**	**11**	**10**	**0**	**2**	**1**	**0**	**46**	**0.8**
MSZ242-13	1.092	10	9	6	0	0	0	40	0.8
Snowden	**1.080**	**9**	**10**	**6**	**0**	**0**	**0**	**36**	**0.9**
MSFF292-1	1.086	6	12	5	0	0	0	26	1.0
MSFF321-1	1.087	10	5	7	0	1	0	43	1.0
MSGG263-1	1.073	10	7	6	1	1	0	40	1.0
MSGG195-1	1.075	8	7	5	2	0	0	36	1.0
MSBB610-13	1.082	7	6	3	4	0	0	35	**1.2**
MSDD247-11	1.090	6	10	9	1	1	0	22	**1.3**
MSDD039-01	1.078	5	9	8	2	1	0	20	**1.4**
MSAA240-5	1.086	3	11	4	5	1	0	13	**1.6**
MSFF097-6	1.087	1	13	7	1	2	0	4	1.6
Manistee	**1.077**	**5**	**9**	**5**	**4**	**1**	**1**	**20**	**1.6**
Lamoka	**1.084**	**2**	**11**	**6**	**4**	**1**	**0**	**8**	**1.6**
MSDD085-13	1.081	1	10	9	3	1	0	4	**1.7**
MSBB230-1	1.085	5	6	9	1	4	0	20	**1.7**
MSFF036-1	1.077	3	10	3	6	2	0	13	1.8
Petoskey	1.086	6	5	6	3	3	1	25	1.8
MSEE115-1	1.094	3	7	3	7	1	0	14	**1.8**
MSEE031-3	1.083	2	6	11	6	0	0	8	1.8
MSEE207-2	1.083	6	4	8	4	1	2	24	1.8
MSFF037-17	1.090	4	5	8	6	2	0	16	1.9
MSDD244-05	1.084	2	8	7	6	2	0	8	**1.9**
MSDD376-4	1.088	4	6	8	4	1	2	16	**1.9**
MSDD247-07	1.098	4	7	5	3	4	1	17	**2.0**
MSBB060-1	1.079	3	8	6	4	4	1	12	**2.0**
MSBB058-3	1.085	6	2	9	2	5	1	24	**2.0**
MSFF079-16	1.083	2	7	9	4	1	2	8	2.0
MSBB614-15	1.081	4	4	6	6	2	1	17	**2.0**
MSAA217-3	1.093	3	5	8	5	4	0	12	**2.1**
MSFF038-3	1.086	6	3	6	5	3	2	24	2.1
MSBB635-14	1.077	5	5	3	8	2	2	20	**2.1**
MSEE171-2	1.080	3	6	6	4	6	0	12	2.2
MSFF007-2	1.085	4	7	6	1	3	4	16	2.2
MSGG409-3	1.078	1	11	9	3	1	5	3	2.2
MSDD249-9	1.087	2	5	6	8	2	1	8	**2.3**
Mackinaw	**1.092**	**2**	**4**	**8**	**7**	**1**	**2**	**8**	**2.3**
MSDD244-15	1.078	2	6	7	4	2	3	8	**2.3**
MSBB058-1	1.095	1	4	8	9	3	0	4	**2.4**
MSEE016-07	1.094	1	7	7	2	3	5	4	**2.6**
MSDD553-1	1.078	2	3	5	7	8	0	8	**2.6**
MSAA076-6	1.089	0	6	8	5	0	6	0	**2.7**
MSBB630-2	1.081	2	6	4	2	4	6	8	**2.8**
MSDD372-07	1.094	1	2	10	2	5	5	4	**2.9**
MSGG194-3	1.079	0	2	9	6	5	3	0	2.9
MSW474-1	1.082	0	3	4	5	7	6	0	3.4

ENTRY	SP GR	NUMBER OF SPOTS PER TUBER 0	1	2	3	4	5+	PERCENT (%) BRUISE FREE	AVERAGE SPOTS/TUBER
ADAPTATION TRIAL, CHIP-PROCESSING LINES (contd.)									
MSEE035-4	1.091	1	1	2	6	10	5	4	3.5
MSEE016-10	1.095	0	2	0	3	9	8	0	4.0
ADAPTATION TRIAL, TABLESTOCK LINES									
MSFF145-2R	1.066	26	1	0	0	0	0	**96**	**0.0**
Colomba	1.051	22	3	0	0	0	0	88	0.1
MSZ109-8PP	1.066	22	3	0	0	0	0	88	0.1
MSCC553-1R	1.074	21	3	0	0	0	0	88	0.1
Golden Globe	1.065	20	4	1	0	0	0	80	0.2
MSFF305-1RY	1.071	19	6	0	0	0	0	76	0.2
MSFF142-1P	1.071	17	6	0	0	0	0	74	0.3
Becca Rose	1.064	19	5	1	0	0	0	76	0.3
Dark Red Norland	**1.057**	**17**	**7**	**0**	**0**	**0**	**0**	**71**	**0.3**
Blackberry	1.066	17	8	0	0	0	0	68	0.3
MSGG039-11	1.071	17	8	0	0	0	0	68	0.3
MSZ416-8RY	1.060	19	4	2	0	0	0	76	0.3
MSGG135-1R	1.076	17	7	1	0	0	0	68	0.4
MSDD088-1	1.073	15	8	1	0	0	0	63	0.4
MSFF230-2PY	1.080	18	5	2	1	0	0	69	0.5
MSGG039-08	1.071	16	6	3	0	0	0	64	0.5
MSGG084-1	1.070	15	7	1	1	0	0	63	0.5
MSBB371-1YSPL	1.073	13	11	1	0	0	0	52	0.5
MSAA174-1	1.058	12	10	2	0	1	0	48	0.7
MSAA182-3R	1.078	11	9	4	1	0	0	44	0.8
MSFF120-2Y	1.070	10	10	5	0	0	0	40	0.8
Reba	**1.071**	**8**	**10**	**4**	**0**	**0**	**0**	**36**	**0.8**
MSGG137-1R	1.070	9	12	3	1	0	0	36	0.8
MSFF182-1R	1.086	6	16	3	0	0	0	24	0.9
MSFF353-1R	1.078	11	7	6	1	0	0	44	0.9
MSGG127-3R	1.081	11	8	4	2	0	0	44	0.9
Yukon Gold	**1.071**	**9**	**10**	**6**	**0**	**0**	**0**	**36**	**0.9**
MSAA101-01RR	1.077	6	11	8	1	0	0	23	1.2
Jacqueline Lee	1.079	3	12	6	2	0	0	13	1.3
MSFF230-1	1.082	8	6	5	4	1	0	33	1.3
MSFF031-6	1.067	6	8	4	3	2	1	25	1.6
MSFF138-04R	1.077	5	6	7	6	1	1	19	1.8
MSFF335-2RR	1.066	2	4	7	5	1	0	11	1.9
PRELLIMINARY CHIP									
MSEE025-1	1.077	21	2	0	0	0	0	91	0.1
MSFF191-1Y	1.064	22	3	0	0	0	0	88	0.1
MSFF029-10	1.087	21	4	0	0	0	0	84	0.2
MSGG169-2	1.068	9	0	1	0	0	0	90	0.2
MSEE052-5	1.076	16	8	1	0	0	0	64	0.4
MSDD084-19	1.080	13	8	3	1	0	0	52	0.7
Mystere	1.076	12	9	4	0	0	0	48	0.7
MSFF022-2	1.076	12	8	3	1	1	0	48	0.8
MSDD050-B	1.069	12	4	5	2	1	0	50	1.0
MSEE063-6	1.080	3	6	3	0	0	0	25	1.0
MSGG190-1	1.078	10	8	4	2	1	0	40	1.0
MSFF008-1	1.078	5	6	4	4	0	0	26	1.4
MSFF035-2	1.080	3	10	11	0	1	0	12	1.4
Atlantic	**1.083**	**1**	**6**	**5**	**0**	**1**	**0**	**8**	**1.5**
Snowden	**1.085**	**2**	**8**	**10**	**5**	**0**	**0**	**8**	**1.7**
Mackinaw	**1.091**	**4**	**7**	**7**	**3**	**3**	**0**	**17**	**1.8**
MSGG242-1	1.088	1	8	7	5	3	0	4	2.0
MSGG302-1	1.090	1	1	5	5	1	0	8	2.3
Petoskey	1.095	0	3	12	8	2	0	0	2.4
MSEE149-1	1.079	2	2	3	2	3	1	15	2.4
MSEE149-2	1.084	3	4	6	4	6	2	12	2.5
MSFF088-1	1.083	3	1	3	4	4	2	18	2.6

ENTRY	SP GR	NUMBER OF SPOTS PER TUBER 0	1	2	3	4	5+	PERCENT (%) BRUISE FREE	AVERAGE SPOTS/TUBER
PRELIMINARY PIGMENTED									
W17005-3R	1.059	21	1	0	0	0	0	95	0.0
W17026-4R	1.054	12	1	0	0	0	0	92	0.1
Dark Red Norland	**1.054**	**18**	**6**	**1**	**0**	**0**	**0**	**72**	**0.3**
W16025-5R	1.055	18	6	1				72	0.3
MSFF335-3Pinto	1.064	15	9	1	0	0	0	60	0.4
MSFF338-1PP	1.061	15	8	2	0	0	0	60	0.5
MSFF030-1WR	1.060	7	4	1	1	0	0	54	0.7
MSFF334-1Pinto	1.059	7	3	3	0	0	0	54	0.7
PRELIMINARY TABLE									
Sifra	1.061	21	2	1	0	0	0	88	0.2
Dark Red Norland	**1.056**	**13**	**1**	**1**	**0**	**0**	**0**	**87**	**0.2**
Camelia	1.060	19	6	0	0	0	0	76	0.2
Jelly	1.074	18	5	2	0	0	0	72	0.4
Allison	1.070	13	4	4	2	0	0	57	0.8
MSAA127-01PP	1.059	6	16	3	0	0	0	24	0.9
Spartan Splash	1.070	10	8	4	1	1	0	42	1.0
MSFF050-1	1.069	5	4	3	1	0	0	38	1.0
MSGG030-3Y	1.066	6	10	7	1	1	0	24	1.2
MSFF301-3SPL	1.079	8	4	10	3	0	0	32	1.3
MSFF149-01	1.081	6	9	3	5	2	0	24	1.5
USPB/SFA TRIAL CHECK SAMPLES (Not bruised)									
Lamoka	**1.083**	**15**	**7**	**2**	**1**	**0**	**0**	**60**	**0.6**
AF6165-9	1.085	11	10	4	0	0	0	44	0.7
Snowden	**1.085**	**11**	**10**	**2**	**2**	**0**	**0**	**44**	**0.8**
MSAFB635-15	1.087	11	9	2	3	0	0	44	0.9
NY174	1.079	7	11	6	0	1	0	28	1.1
AF6200-4	1.080	5	9	5	3	2	1	20	1.6
NY177	1.095	1	8	7	7	0	2	4	2.1
USPB/SFA TRIAL BRUISE SAMPLES									
NY174	1.079	5	7	9	3	0	1	20	1.6
MSAFB635-15	1.087	8	7	3	2	3	2	32	1.6
Lamoka	**1.083**	**2**	**8**	**6**	**7**	**1**	**1**	**8**	**2.0**
AF6165-9	1.085	2	7	6	4	5	1	8	2.2
Snowden	**1.085**	**3**	**6**	**7**	**3**	**3**	**3**	**12**	**2.2**
NY177	1.095	1	3	6	4	9	2	4	2.9
AF6200-4	1.080	1	4	2	3	2	13	4	3.6
DIPLOID TRIAL (replicated trial)									
MSHH618-01	1.068	25	0	0	0	0	0	100	0.0
Lamoka	**1.081**	**9**	**12**	**4**	**0**	**0**	**0**	**36**	**0.8**
MSHH693-01	1.088	7	9	5	2	2	0	28	1.3
MSHH699-02	1.092	6	6	3	5	0	1	29	1.5
MSII1591-2	1.099	5	6	6	3	3	0	22	1.7
MSGG655-01	1.084	3	6	9	5	1	1	12	1.9
Atlantic	**1.086**	**3**	**4**	**9**	**6**	**3**	**0**	**12**	**2.1**
MSFF690-01	1.081	6	3	5	7	2	2	24	2.1
MSHH1043-02	1.077	0	3	9	12	1	0	0	2.4
MSGG691-06	1.072	1	4	3	6	6	3	4	2.9
MSII1591-3	1.096	0	1	4	10	9	1	0	3.2
MSHH1041-4	1.068	0	2	2	7	3	4	0	3.3
MSII1081-2	1.083	0	1	3	2	3	3	0	3.3
MSII1117-1	1.084	0	1	3	7	8	5	0	3.5
MSHH664-01	1.074	0	1	1	5	12	6	0	3.8

* Thirteen to twenty-five (dependent on the number of replications used) A-size tuber samples were collected at harvest, held at 50 F at least 12 hours, and placed in a six-sided plywood drum and rotated ten times to produce simulated bruising. Samples were abrasive-peeled and scored 10/27/2023.

The table is presented in ascending order of average number of spots per tuber.