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Table 1: Grading characteristics and standards used in the Wisconsin Variety and Advanced Selection Trial evaluation and SPUDPRO Candidate Trial

Yield Characteristics:

A-size	Yield of marketable tubers remaining after removal of < 1 ^{7/8} " diameter and cull tubers according to USDA standards; expressed as cwt/acre and % of Total Yield.
B-size, < 1 ^{7/8} "	Tubers less than 1 ^{7/8} " diameter, separated by a scroll sizer; expressed as a % of Total Yield
Culls	Pick outs of green, rot, growth crack, off-shape and other forms of external defects; expressed as a % of Total Yield
Total Yield:	Total tuber harvest including A-size grade, < 1 ^{7/8} " diameter (B-size) and Cull tubers; expressed as cwt/acre .
Specific Gravity:	Measure of potato solids at or shortly after harvest; measurements determined by weight in air/weight in water method (specific gravity = weight in air/weight in air-weight in water). Approximate conversions: 1.060 = 16.4% solids; 1.070 = 18.5% solids; 1.080 = 20.7% solids and 1.090 = 22.9% solids.

Internal Defects: % free of defect (brown center, hollow heart, internal brown spot, vascular discoloration); *scored on samples averaging 50 tubers*)

Tuber External Characteristics:

Preference	A combined rating of general tuber appearance, relative size, uniformity and yield; 1 = best, 2 = acceptable), 3 = marginal, > 4 = discard
Shape, L x W	Rating of tuber shape with respect to length and width; 1 = spherical, 2 = round, 3 = round/oval, 5 = oval, 7 = long/oval, 9 = very long
Shape, Thickness	Rating of tuber flatness observed in the cross section where; 9= round, 7=moderately full, 5=flat, 3= extremely flat
Size	Scale of tuber size within the expected category; 9= extremely large, 7=large, 5=medium, 3=very small
Size Uniformity	Scale of uniformity were; 9=complete uniformity, 7=generally uniform, 5=variable, 3= extremely variable
Photovolt	French Fry evaluation: Measured at stem end and center of tubers; higher value represent
Hunter L Value	Chip evaluation: spectrum which most accurately describes light color of chips; higher value represents lighter color, > 55 acceptable
Statistical Significance:	All statistical differences of individuals were measured with respect to their category (i.e. russets, whites). <i>Bolded-Italicised</i> numbers are considered statistically better than the reference standard variety and those <u>numbers with underlines are considered statistically poorer</u> . Least Significant Difference (LSD - 0.05), from reference variety is located at the top of each table.
Shading	Column headings that are shaded indicate variables where lower values are considered more desirable.
No Data	Tables with columns lacking data indicate no data was collected at referenced location

Table 2. Wisconsin Variety Trial **Russet** data, Hancock, WI, 2012

(refer to Table 1 - Key to trait scales and explanations)

Entry ¹	Market	Specific Gravity	Total Yield	A-Size > 1 ^{7/8} "		B-Size < 1 ^{7/8} "	Culls	Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Tuber Pref.	Maturity Rating	Photovolt (10/2012)		Comments
			cwt/ac	cwt/ac	%	%		%	(1-9)	(1-9)	(1-5)		Stem	Center	
LSD-Rus. Burbank		0.004	84	85	7	6	4		0.6	0.7	0.3				
Russet Burbank	proc	1.071	597	407	67	17	21	97	6	8	3.3	ML	18	29	bottlenecks,var. shp,G.C.
A02062-1TE	dual	<u>1.066</u>	539	437	81	8	11	90	8	8	2.3	ML+	42	47	Nice russetting, long/oval
A03158-2TE	dual	1.074	673	568	84	6	10	90	7	8	2.3	ML	34	36	dp eyes and var. shp
AF3001-6	fresh	1.078	762	606	80	4	16	97	7	8	2.4	ML+			early mat., light rus
AF3362-1	proc	<u>1.065</u>	663	590	89	4	7	73	8	8	2.0	M	24	27	med rus, excel size- lg & width
AF4124-4 ¹	proc	<u>1.063</u>	573	464	81	14	6	87	6	7	2.2	ME+	30	38	light rus, again
AF4281-3 ¹	proc	1.077	648	573	89	7	6	90	7	7	2.2	ME-	29	45	ptd. ends, ~light rus
Alpine	proc	1.080	672	515	77	14	10	97	6	7	2.6	ML	29	35	~ptd. stem, ~Burbank shp
AOTX02136-1RU ¹	fresh	1.068	<u>461</u>	373	82	8	10	89	6	7	1.8	ME			nice, again
AOTX96216-2RU	fresh	<u>1.051</u>	529	348	66	6	<u>28</u>	57	8	<u>6</u>	3.3	ML+			stolons, ~dark rus, var. shp
Canela	fresh	1.077	<u>495</u>	413	84	9	7	83	7	<u>7</u>	2.0	ML			med size, med rus
CO03187-1RU ¹	fresh	<u>1.061</u>	<u>468</u>	347	73	<u>24</u>	4		5	<u>6</u>	2.1	ME			med rus, type, size?, again
CO03202-1RU ¹	fresh	1.068	526	377	71	14	15	93	6	8	2.9	L			med rus, too narrow
CO03276-4RU ¹	fresh	<u>1.067</u>	678	411	61	16	23	100	8	8	2.5	ME			med rus
CO03276-5RU ¹	fresh	1.070	782	566	72	20	8	93	6	8	2.0	ML			med-dark rus, again
CO04211-4RU ¹	fresh	<u>1.067</u>	<u>500</u>	426	87	9	5	71	6	<u>5</u>	3.3	ME			too rd, med/dark rus, flat, drop
Goldrush	fresh	<u>1.059</u>	555	344	62	12	<u>25</u>	100	7	8	2.7	ML+			var. shp, ~long, med/dark rus, G.C.
Mesa Russet	dual	1.071	619	545	88	7	6	87	8	7	1.5	ML-	34	42	growth crack, nice size
MN02419 ¹	dual	1.081	524	385	73	16	11	100	6	7	2.5	ML-	33	36	late vines
MN0246rus/Y ¹	fresh	1.073	555	439	79	13	8	73	7	7	1.8	ML			very light, unif., med rus, again
MN18747LW ¹	proc	<u>1.064</u>	<u>466</u>	403	89	4	8	93	7	<u>6</u>	2.9	ML	36	44	long white, poor stand
Norkotah-Std	fresh	<u>1.064</u>	533	453	86	12	3	83	6	<u>6</u>	2.3	ML			~dp eyes
Norkotah-Sel8	fresh	1.068	607	518	86	7	7	93	8	<u>7</u>	1.8	L+			~oval, ~dark rus, hvy net, med size
Pallisade	proc	1.089	589	498	84	8	8	93	7	<u>7</u>	2.6	ML	32	33	~var. shp, lt rus, late, var. size, surf scab
Premier	proc	1.087	633	559	89	6	6	87	7	<u>6</u>	1.8	M	40	43	med rus, blocky
Silverton Russet	fresh	1.068	603	539	90	6	5	93	8	8	1.9	ML+			hvy net, all long
TXA549-1RU ¹	fresh	1.069	<u>499</u>	402	81	13	7	83	6	<u>6</u>	2.5	ME-			round to long, drop?
Umatilla	proc	1.077	659	502	76	11	13	87	6	8	2.4	ML	28	35	~dp eyes, ~var. shp
W6234-4rus	dual	1.077	606	539	89	7	4	87	7	<u>6</u>	2.0	ML	44	47	blocky, good size, light rus
W8722-1rus ¹	fresh	1.070	595	512	87	10	5	97	7	<u>6</u>	2.2	ML			hvy net, again
W9133-1rus ¹	fresh	<u>1.061</u>	662	567	86	8	7	93	8	<u>6</u>	1.8	ML			hvy net, too round?
W9759-1rus ¹	fresh	<u>1.067</u>	571	465	82	9	10	97	7	7	2.1	ME-			good type! again
Average- rus		1.071	603	483	81	10	9	88	6.7	6.9	2.3		33	38	

1. First year entries planted as single replicate, observation plots.

Table 3. Wisconsin Variety Trial **Russet** data, Antigo, 2012 *.

(refer to Table 1 - Key to trait scales and explanations)

Entry ¹	Market	Specific Gravity	Total Yield	A-Size, > 1 ^{7/8} "		B-Size < 1 ^{7/8} "	Culls	Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Tuber Pref.	Maturity Rating			Comments
			cwt/ac	cwt/ac	%			%	(1-9)	(1-9)	(1-5)				
Rus Burbank	proc	1.078	343	287	84	5	11	92	7	7	2.5	ML			small, rgh
A02062-1TE	dual	1.072	345	289	84	1	15	85	8	8	1.5	ME			good length,full shape,~deep eyes
A03158-2TE	dual	1.079	448	389	87	2	11	92	8	8	1.5	ML-			excel shp, full
AF3001-6	fresh	1.089	463	410	89	2	9	94	8	7	3.5	ML			stolens,knobs,~flat
AF3362-1	proc	1.075	372	320	86	4	10	88	8	8	1.5	ML			good size & Lt white, too flat?
AF4124-4 ¹	proc	1.077	323	290	90	6	4	90	6	7	2.5	ME+			~flat,variable size
AF4281-3 ¹	proc	1.080	347	300	86	2	12	93	7	5	4.0	ME			lt rus,no consistant shape
Alpine	proc	1.084	354	272	77	6	17	89	7	7	2.0	ME-			green & knobs
AOTX02136-1RU ¹	fresh	1.072	329	280	85	7	8	92	7	8	1.5	E-			very nice
AOTX96216-2RU	fresh	1.060	416	185	45	39	16	44	8	8	4.0	ME+			dark russet,variable shape,G.C.
Canela	fresh	1.084	283	232	82	5	13	81	7	8	2.0	ME			knobs
CO03187-1RU ¹	fresh	1.074	274	227	83	15	3	87	6	6	2.5	E-			~blocky,~variable size,good rus, ~ white
CO03202-1RU ¹	fresh	1.086	45			40	60	87	7	9	3.5	ME+			lt rus,too narrow,
CO03276-4RU ¹	fresh	1.076	363	320	88	7	5	97	8	8	2.0	ME			~deep eyes,again
CO03276-5RU ¹	fresh	1.079	372	294	79	13	8	88	7	8	3.0	E-			very large, hvy net
CO04211-4RU ¹	fresh	1.076	321	276	86	5	9	56	6	5	4.0	ME+			too round
Goldrush	fresh	1.069	305	240	79	6	15	87	6	8	2.0	ME+			variable shape, good russetting
Mesa Russet	dual	1.076	216	174	81	8	11	96	7	7	2.5	ME-			alligator skin
MN02419 ¹	dual	1.080	345	167	48	4	47	56	8	7	4.0	ML			knobs
MN0246rus/Y ¹	fresh	1.081	316	287	91	8	1	89	6	8	2.0	ME			some G.C., again
MN18747LW ¹	proc	1.072	214	196	92	5	3	91	8	6	2.5	E-			med-yell., deep eyes,~var. surface shape
Norkotah- Std	fresh	1.072	318	267	83	7	10	79	7	7	1.8	ME			smaller than Sel-8
Norkotah-Sel8	fresh	1.077	379	316	83	6	11	91	8	7	2.0	ME+			~deep eyes
Pallisade	proc	1.093	192	131	68	11	21	96	6	6	3.0	ML			knobs,2nd growth
Premier	proc	1.090	354	289	82	9	9	94	8	7	1.5	ML			best shape, lt russetting
TXA549-1RU ¹	fresh	1.076	214	178	83	8	8	100	6	5	3.0	E-			too oval
Umatilla	proc	1.083	389	298	77	7	17	88	6	7	2.5	ML+			variable shape
W6234-4rus	dual	1.079	314	280	89	5	6	92	7	7	2.5	E-			blocky, v. lt russetting
W8722-1rus ¹	fresh	1.073	325	283	87	4	9	96	7	7	2.5	ML+			G.C.,dark rus
W9133-1rus ¹	fresh	1.067	423	323	76	21	3	97	7	6	1.5	ME			blocky, watch yield & rounds
Average-rus		1.078	323	269	81	9.0	12.8	87	7.0	7.1	2.5				

* Antigo is a single replicate site

1. First year entries.

Table 4. Wisconsin Variety Trial **Round White** data, Hancock, WI, 2012 (refer to Table 1 - Key to trait scales and explanations)

Entry ¹	Chip storage	Specific Gravity	Total Yield	A-Size, > 1 ^{7/8"}		B-Size < 1 ^{7/8"}	Culls	Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Tuber Pref.	Maturity Rating	Hunter (10/10/11)	Comments
			cwt/ac	cwt/ac	%	%	%	%	(1-9)	(1-9)	(1-5)		L-value	
LSD-Snowden		0.005	85	90	7	5.5	4.7		0.7	0.8	0.3		-	
Snowden	long	1.083	727	704	97	3	1	97	8	3	2.2	ML+	58	unif. size,dp eyes,full shp
Accumulator	early	1.084	868	779	89	7	4	90	7	3	2.6	ML	58	rgh,~scab,dp eyes,~var. shp,stolons
AF4157-6 ¹	early	<u>1.077</u>	<u>548</u>	<u>471</u>	<u>85</u>	<u>14</u>	2	100	<u>5</u>	3	2.5	ME+	-	too small,scab
Atlantic	none	1.085	674	634	94	5	2	80	7	3	2.0	ML	54	~dp eyes,full shp
Lamoka	long	1.079	<u>500</u>	<u>461</u>	93	6	2	100	7	4	2.0	ML	61	unif. size,~oval
Lelah	long	1.084	<u>488</u>	<u>442</u>	90	<u>9</u>	2	97	<u>6</u>	3	2.0	ML+	60	smth,needs size
NY140 ¹	long	<u>1.078</u>	705	655	92	6	2	90	8	4	2.5	ML+	57	too var. in size & eyes
NY148	long	1.088	708	646	91	7	2	100	<u>7</u>	3	<u>2.6</u>	ME-	49	var. size,netting,dp eyes
Nicolet	long	1.084	650	<u>605</u>	93	7	1	100	7	3	2.0	ML+	57	unif., ~dp eyes
Superior	none	<u>1.068</u>	<u>590</u>	<u>554</u>	94	5	2	87	7	4	2.5	ME-	40	~dp eyes,netting
Tundra	mid-long	1.091	<u>599</u>	<u>531</u>	<u>88</u>	8	4	100	<u>5</u>	3	2.2	ML	59	gd size!~flat
W6483-5	mid-long	<u>1.075</u>	<u>509</u>	<u>478</u>	94	5	2	93	7	3	2.0	ML+	61	dp apical eye,excel. size, unif.
W8641-4	long	1.085	<u>639</u>	<u>592</u>	92	8	1	100	<u>6</u>	2	2.0	M	36	unif.,netted,~dp apical
Average - white			1.081	<u>631</u>	<u>581</u>	92	7	2.1	94.9	<u>6.8</u>	3.2	2	54	

1. First year entries planted as single replicate, observation plots.

Table 5. Wisconsin Variety Trial **Round White**, Antigo, WI, 2012*.

Entry ¹	Chip storage	Specific Gravity	Total Yield	A-Size, > 1 ^{7/8"}		B-Size < 1 ^{7/8"}	Culls	Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Shape (Thickn ess)	Size Uniform	Tuber Pref.	Maturity Rating	Comments
			cwt/ac	cwt/ac	%	%	%	%	(1-9)	(1-9)	(1-9)	(1-9)	(1-5)		
Snowden	long	1.092	438	412	94	3	3	70	7	3	7	8	2.0	ML+	~deep eyes,otherwise good
Accumulator	early	1.090	566	541	96	1	3	55	8	3	7	3	3.0	ML	variable surface shape
AF4157-6 ¹	early	1.082	370	312	84	5	10	74	7	4	8	7	2.0	M	~deep eyes,G.C.
Atlantic	none	1.090	318	292	92	5	3	93	7	3	6	7	2.9	ML	deep eyes
Lamoka	long	1.083	338	312	92	3	4	91	8	5	6	7	2.0	ME-	large, ~oval
Lelah	long	1.090	363	318	88	8	5	72	6	3	5	7	2.0	ME+	slightly variable
NY140 ¹	long	1.085	307	283	92	5	2	81	8	3	6	6	2.5	ME-	good size,deep apical
NY148	long	1.087	314	276	88	4	8	87	8	4	7	7	2.0	ML	~deep Apical
Nicolet	long	1.098	325	272	84	8	8	93	5	2	5	6	2.0	ML	low set,'variable size
Superior	none	1.072	323	300	93	6	1	86	6	3	7	8	2.0	E	~oval,very uniform size
Tundra	mid-long	1.086	336	305	91	3	6	96	6	3	4	7	2.0	ML	low set
W6483-5	mid-long	1.081	310	276	89	5	6	87	7	3	8	8	2.0	ME-	G.C.? Capiesed deep apical
W8641-4	long	1.092	329	298	91	7	2	93	5	2	8	8	2.0	ML-	uniform,watch yield & size
Average - white			1.087	357	323	90	4.9	4.9	82.7	6.6	3.2	6.4	6.8	2.2	

* Antigo is a single replicate site

1. First year entries.

Table 6. Wisconsin Variety Trial **Yellow Flesh** data, Hancock, WI, 2012

(refer to Table 1 - Key to trait scales and explanations)

Entry ¹	Market	Specific Gravity	Total Yield	A-Size > 1 ^{7/8} "		B-Size < 1 ^{7/8} "	Culls	Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Shape (Thickn ess)	Size Uniform	Tuber Pref.	Maturity Rating	Comments
			cwt/ac	cwt/ac	%										
LSD-Yukon Gold		0.005	85	88	7	5	5		0.6	0.8	1.0	0.7	0.3		
Yukon Gold	fresh	1.070	531	477	90	8	2	100	6	3	7	8	2.0		~flat on some tubers,unif,good size
AF4013-3 ¹	fresh	1.077	670	588	87	9	4		6	5	7	2	2.4		~pears,~oval & flat
Agila	fresh	1.088	688	617	89	7	4	97	7	5	7	8	2.0		full shp, ~oval
Alegria	fresh	1.070	493	438	89	7	5	87	7	5	7	7	2.0		~oval,good
ATX03564-1Y/Y ¹	fresh	1.065	705	502	71	20	9		5	5	7	5	3.2		~long,small,var. shp,drop
Cascada	fresh	1.074	683	451	66	28	7		4	5	7	6	2.4		15% growth cracks,~oval,~lg
CO99045-1W/Y	fresh	1.084	772	675	87	10	4	70	6	6	7	2	2.4		light rus,~long white,~round, off shp
COTX04015-3AW/Y ¹	fresh	1.072	589	491	83	11	7	83	5	5	7	5	2.8		stolons,late,var. shp
MN02586Y ¹	fresh	1.077	588	526	89	9	2		5	3	7	8	2.4		pig tails,scab
MN04844-07Y ¹	fresh	1.078	445	369	82	16	2	93	4	3	7	8	2.0		small & unif.,light yell.
Mondak Gold	fresh	1.076	629	522	83	8	9		6	6	7	6	2.6		ptd. stem,light yell/red,pears
Smiley	fresh	1.066	510	429	84	9	7	97	6	6	7	5	2.4		smth,spec,~ptd. stem
Soraya	fresh	1.059	830	643	77	15	8	97	5	5	7	2	2.3		~pears,prot.& shallow eyes,oval
Talent	fresh	1.084	592	442	74	20	2	87	6	6	7	6	2.4		~ pear shp~ptd. stem
W6703-1Y	fresh	1.076	579	515	89	10	2	93	6	3	7	8	2.0		better than W6703-5Y,unif. shp & size
W6703-5Y	fresh	1.069	623	549	88	5	2		7	3	7	6	2.4		stolons,var. size,netting?pig tails
YukonGem	fresh	1.068	789	716	91	5	5	70	7	5	7	7	2.4		flat.~oval,~ptd. & pear shp,smth
Average- YF		1.074	630	526	83	11.6	5.3	88	5.8	4.5	7.3	6.6	2.3		

Table 7. Wisconsin Variety Trial **Yellow Flesh**, Antigo, WI, 2012 *.

Entry ¹	Market	Specific Gravity	Total Yield	A-Size, > 1 ^{7/8} "		B-Size < 1 ^{7/8} "	Culls	Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Shape (Thickn ess)	Size Uniform	Tuber Pref.	Maturity Rating	Comments
			cwt/ac	cwt/ac	%										
Yukon Gold	fresh	1.095	355	326	92	5	3	72	7	3	7	8	2.2	ME-	good skin finish, scab
AF4013-3 ¹	fresh	1.079	365	327	90	7	3	86	8	5	7	7	2.0	ME+	good size,~deep eye on apical
Agila	fresh	1.096	512	459	90	5	6	93	6	5	7	4	3.0	ME-	variable shape
Alegria	fresh	1.074	468	301	64	3	33	81	8	5	5	3	4.0	ME	variable shape,knobs
ATX03564-1Y/Y ¹	fresh	1.077	579	496	86	4	10	95	7	6	7	6	2.5	ML-	~irregular shape,green
Cascada	fresh	1.079	412	316	77	10	13	100	6	4	7	4	3.5	ML-	late vine, surface scab,G.C.,irregular shape
CO99045-1W/Y	fresh	1.086	414	341	82	11	7	92	6	7	7	6	2.5	ML+	narrow and long, long-white
COTX04015-3AW/Y ¹	fresh	1.082	477	396	83	8	9	90	8	5	6	4	3.0	ML-	variable shape!! Irregular
MN02586Y ¹	fresh	1.081	419	370	88	8	4	88	6	3	8	8	2.5	M	~variable shape,lenticels
MN04844-07Y ¹	fresh	1.079	298	278	93	5	1	95	5	2	8	8	2.0	M	hvy netting
Mondak Gold	fresh	1.085	330	276	84	5	11	70	7	7	5	5	2.5	L	variable shape.~lg, scab
Soraya	fresh	1.064	537	378	70	5	25	94	7	5	6	4	3.5	ME-	surface scab, knobs
Talent	fresh	1.083	252	203	81	12	7	71	6	6	5	5	2.5	ML	best of Norika lines
W6703-1Y	fresh	1.144	376	359	96	4	0	96	7	2	2	8	2.5	L	very good, sl netting
W6703-5Y	fresh	1.058	231	200	87	13	1	97	5	3	8	7	2.5	ML-	deep apical end & netting
YukonGem	fresh	1.069	365	292	80	1	18	83	8	5	7	4	3.0	ME	variable shape,lenticels,
Average-YF		1.083	399	332	84	6.7	9.5	87.6	6.5	4.6	6.4	5.7	2.7		

* Antigo is a single replicate site

1. First year entries.

Table 8. Wisconsin Variety Trial **Red skin** data, Hancock, WI, 2012 (refer to Table 1 - Key to trait scales and explanations)

Entry ¹	Market		Total Yield	A-Size, > 1 ^{7/8"}		B-Size < 1 ^{7/8"}	Culls	Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Shape (Thickn ess)	Size Uniform	Tuber Pref.	Maturity Rating	Comments
			cwt/ac	cwt/ac	%	%		%	(1-9)	(1-9)	(1-9)	(1-9)	(1-5)	(Hancock)	
LSD-DR Norland			85	88	7	5.4	5		0.6	0.8	1.0	0.7	0.3		
D.R. Norland	fresh		651	584	90	9	2	100	6	4	7	8	2.5	ME-	pr color,salt & pepper,scurf,skin cracking,
ATTX98453-3R ¹	fresh		598	554	93	6	2		7	3	7	7	2.5	ML+	~flat,med color
ATTX98453-6R	fresh		504	462	92	6	3	97	7	3	7	6	2.2	ML	gd color,low set,lrg size
ATTX98468-5R/Y ¹	fresh		771	668	86	8	6	93	7	3	7	5	3.6	ML-	drop,no color,late stolons,dp eyes
BTX2103-3R/Y ¹	fresh		726	620	85	12	4		4	3	7	6	2.8	L+	Drop,med color,scab,flat,light yell.
CO00291-5R ¹	fresh		616	554	90	8	3	100	6	3	7	7	2.5	L-	very late?,var. size,dark color,pigtails
CO00405-1RF	fresh		482	296	53	46	2	77	3	9	7	7	2.5	ML	fingerl, med-lg size, gd color & skin fin.
CO04159-1R ¹	fresh		588	499	84	14	2		6	3	7	8	1.7	ML	*,excel. color,unif.,again
NDA7985-1R ¹	fresh		671	596	88	6	6	87	6	4	7	6	2.8	ML+	dp color,~rgh,late,cracking skin
Smiley	fresh		545	468	86	9	5	97	6	5	7	7	1.8	M	smth,spec,~ptd. stem
W6002-1R	fresh		724	644	89	10	2		7	3	7	8	1.7	ML+	med color,no defects,unif,smth
W6511-1R	fresh		664	408	61	20	19	93	5	6	7	4	3.6	ME-	off shp,dumbbells,gd color,G.C.
W8370-2R	fresh		509	380	74	25	2	100	5	3	7	8	2.6	ML+	~flat,smth skin,no color
W8886-3R	fresh		593	521	88	8	4	100	6	4	7	7	1.7	ML	gd color,skin+,smth,*,pear,unif.
W8890-1R	fresh		746	622	83	12	5	93	6	3	7	7	1.9	ML	excel. Color&skin,~var. shp, again
W9398-4R ¹	fresh		615	550	89	8	4		7	3	7	5	2.9	ME	~dp eyes,netted,gd color
W9430-1R ¹	fresh		574	508	88	8	3		6	3	7	7	2.1	ML+	drk color,~many eyes,unif.
W9443-4R ¹	fresh		653	588	90	7	3		6	3	7	6	2.5	ME-	folded bud,gd color
W9726-4R	fresh		561	481	86	10	5	97	6	3	7	8	2.6	ML+	netting,med.color+,G.C.,scab
Average - red			621	526	84	12.2	4.4	94.4	6.0	4	7.3	6.6	2.5		

1. First year entries planted as single replicate, observation plots.

Table 9. Wisconsin Variety Trial **Red skin** data, Antigo, WI, 2012 *.

Entry ¹	Market	Specific Gravity	Total Yield	A-Size, > 1 ^{7/8"}		B-Size < 1 ^{7/8"}	Culls	Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Shape (Thickn ess)	Size Uniform	Tuber Pref.	Mat	Comments
			cwt/ac	cwt/ac	%	%		%	(1-9)	(1-9)	(1-9)	(1-9)	(1-5)		
D.R. Norland	fresh	1.084	394	350	89	4	7	92	6	6	6	4	3.2	ME-	~dp eyes, uniform shp, mod. Color
ATTX98453-3R ¹	fresh	1.078	276	265	96	3	1	100	7	3	5	8	2.5	ME	excel color,smooth skin
ATTX98453-6R	fresh	1.107	272	256	94	6	0	86	8	3	4	8	4.0	ML+	too flat,good color,smooth
ATTX98468-5R/Y ¹	fresh	1.087	365	329	90	9	1	100	7	4	4	4	4.0	M	stolons,variable surface,2 tone red
BTX2103-3R/Y ¹	fresh	1.078	595	516	87	6	7	100	5	3	4	4	4.0	ML+	too flat!
CO00291-5R ¹	fresh	1.068	321	296	92	5	3	84	7	4	8	6	4.0	L	very late,stolons
CO00405-1RF	fresh	1.076	178	122	68	32	0	88	3	9	8	5	2.0	ME+	large fingerling, good color, variable shp
CO04159-1R ¹	fresh	1.072	231	203	88	9	3	100	6	3	8	8	1.5	ME+	bright red,stolons,low set
NDA7985-1R ¹	fresh	1.065	301	272	90	4	6	94	7	4	7	7	2.0	E-	~variable surface scab,bright red
Smiley	fresh	1.085	350	283	81	11	8	100	7	5	7	7	2.0	M	smooth skin, two tone with smiles
W6002-1R	fresh	1.075	251	231	92	7	1	100	7	2	2	8	1.5	ML+	uniform,shallow eye,good color
W6511-1R	fresh	1.080	276	194	70	7	23	92	6	6	7	4	4.0	ML	dark,irregular shape
W8370-2R	fresh	1.078	376	298	79	19	2	95	5	3	6	9	2.5	ME	excel size, uniform, poor color?

(table cont. on next page)

Table 9 (cont). Wisconsin Variety Trial **Red skin** data, Antigo, WI, 2012 *.

Entry ¹	Market	Specific Gravity	Total Yield	A-Size, > 1 ^{7/8} "		B-Size < 1 ^{7/8} "		Free Internal Defects	Tuber Size	Tuber Shape (LxW)	Shape (Thickness)	Size Uniform	Tuber Pref.	Mat	Comments
			cwt/ac	cwt/ac	%	%	%								
D.R. Norland	fresh	1.084	394	350	89	4	7	92	6	6	6	4	3.2	ME-	~dp eyes, uniform shp, mod. Color
W8886-3R	fresh	1.073	312	283	91	3	6	33	7	5	7	6	2.0	ME	excel color & skin,~irregular, G.C.,again
W8890-1R	fresh	1.066	272	240	88	11	1	82	4	3	7	6	3.0	ME+	good color,~pears
W9398-4R ¹	fresh	1.067	347	287	83	6	12	88	8	4	4	4	3.5	E-	eyes too deep, round,~darker than Norl,var. shp
W9430-1R ¹	fresh	1.074	312	276	88	4	8	91	8	2	8	3	4.0	ML	very dark color, some off-shp
W9443-4R ¹	fresh	1.065	434	405	93	4	3	100	7	2	8	7	2.0	E-	very uniform,~compressed & deep , **, excel
W9726-4R	fresh	1.072	207	182	88	9	4	88	7	4	7	6	3.5	ML	excel color,~netting,low set
Average - red		1.077	323	282	87	8	5	90	6.4	4.0	6.1	5.9	2.9		

* Antigo is a single replicate site

1. First year entries.

Table 10. Wisconsin Variety Trial **Red skin** data, Endeavor, WI, 2012 (refer to Table 1 - Key to trait scales and explanations)

Entry ¹	Market		Total Yield	A-Size, > 1 ^{7/8} "		B-Size < 1 ^{7/8} "			Tuber Size	Tuber Shape (LxW)	Shape (Thickness)	Size Uniform	Tuber Pref.	Comments
			cwt/ac	cwt/ac	%	%	%							
LSD-DR Norland			58	55	7	6.8	3		1.6	1.0	1.1	0.6	0.4	
D.R. Norland	fresh		230	184	80	11	9		7	4	5	6.0	2.6	~var. shape,med color,deep eyes
ATTX98453-3R ¹	fresh		245	205	83	11	<u>5</u>		7	3	7	6.1	2.5	stolons,again?
ATTX98453-6R	fresh		237	201	86	10	<u>5</u>		7	3	6	6.2	2.2	stolons,var. color
ATTX98468-5R/Y ¹	fresh		218	170	82	13	6		7	3	6	6.1	2.8	deep eyes,flat
BTX2103-3R/Y ¹	fresh		185	134	87	10	<u>4</u>		7	3	6	6.3	2.8	too flat? Light color
CO00291-5R ¹	fresh		235	198	87	10	<u>4</u>		7	3	7	6.3	2.2	dark color,stolons!!again?
CO00405-1RF	fresh		203	<u>122</u>	<u>53</u>	<u>41</u>	<u>5</u>		7	9	8	6.2	2.2	fingerling,Rhizoc,long,patches of rough
CO04159-1R ¹	fresh		220	175	84	9	7		7	4	7	6.3	2.2	Rhizoc, good color
NDA7985-1R ¹	fresh		259	221	82	10	8		7	4	8	6.3	1.9	again,good color & skin finish
Smiley	fresh		<u>169</u>	<u>116</u>	<u>73</u>	16	10		7	6	7	6.0	2.8	no yield,~protruding eyes,long,var. shape
W6002-1R	fresh		244	204	83	14	<u>3</u>		7	<u>3</u>	8	6.5	2.0	bright red,nice rd, some pears,gd color, again
W6511-1R	fresh		270	197	<u>67</u>	18	14		8	5	7	6.2	<u>3.1</u>	~flat,med color,var. shape,protruding eyes,
W8370-2R	fresh		192	<u>111</u>	<u>52</u>	<u>45</u>	<u>4</u>		7	4	6	6.4	2.6	light color, B's too long,too small,smooth skin
W8886-3R	fresh		268	205	<u>72</u>	6	21		7	5	7	5.9	2.8	15% alligator skin,patches of rough,var. shape
W8890-1R	fresh		226	185	84	11	<u>5</u>		7	3	7	6.2	2.5	Rhizoc, dark color,skins,nice,var. shape
W9398-4R ¹	fresh		257	231	89	6	<u>5</u>		7	3	7	6.2	2.5	netting, var. size,too rough? Largest
W9430-1R ¹	fresh		200	149	80	13	7		7	<u>2</u>	7	6.3	2.8	dark colors,deep eyes
W9443-4R ¹	fresh		207	167	92	5	<u>3</u>		7	3	7	6.1	2.8	deep eyes
W9726-4R	fresh		216	153	<u>69</u>	<u>25</u>	5		7	4	7	6.2	2.8	netting?dark,stolons~oval,lg,~flat,netting
W9730-1RYR ¹	fresh		214	164	79	8	13		7	4	7	6.0	2.8	var. shape & surface
W9962-1RYY ¹	fresh		261	232	88	11	<u>2</u>		7	3	8	6.2	2.2	~deep eyes & surface shape
average - red			226	177	79	14	7		7.5	3.9	6.9	6.2	2.5	

1. First year entries planted as single replicate, observation plots.