

2015 WESTERN REGIONAL CHIPPING POTATO TRIAL REPORT

State Agricultural Experiment Stations and the
USDA-ARS

California
Colorado
Idaho
Oregon
Texas



2015 WESTERN REGIONAL CHIPPING POTATO VARIETY TRIAL REPORT

TABLE

- 1 Locations, Cooperators, and Cultural Information
- 2 Clone, Seed Source, Stand, Tuber and Vine Characteristics, Stems/plant
- 3 Total Yield (CWT/A) - Yield of U.S. No. 1's (CWT/A & %)
- 4 Yield of U.S. No. 1's Over 10 oz. - Yield of Tubers Under 4 oz. (CWT/A & %)
- 5 Specific Gravity
- 6 Average Tuber Size and Tuber Shape
- 7 External Defects - Growth Cracks, Second Growth, Shatter Bruise, and Scab
- 8 Internal Defects - Hollow Heart/Brown Center, Internal Brown Spot, Vascular Discoloration, and Blackspot Bruise
- 9 Chip Color
- 10 Solids, Dextrose, Sucrose, Protein, Vitamin C, Glycoalkaloids (Aberdeen, ID) and Antioxidant Equivalents (Springlake, TX)
- 11 Disease Evaluations - Aberdeen, Hermiston, Corvallis, Klamath Falls, Prosser and Tulelake
- 12 Merit Scores
- 13 Summary of Entry Performance
- 14 Three Year Summary of Graduating Entries
- 15 State Comments and Extra Clonal Information
- 16 State Comments and Extra Clonal Information continued

Compiled by David Holm, Caroline Gray and Katrina Zavislan

TABLE 1: 2015 Western Regional Chipping Potato Variety Trial - LOCATIONS, COOPERATORS, AND CULTURAL INFORMATION

Locations	Cooperators	Trial	Irrigation	Fertilizer N-P-K-S(lb/A)	Spacing	Planting Date	Vine Kill Date	Harvest Date	Days to Vine Kill	Days to Harvest	Herbicides	Insecticides	Fungicides
Tulelake California (CA)	R. Wilson D. Culp	Late	Sprink.	205-104-100-36S	10" x 36"	14-May	2-Sep Reglone	30-Sep	111	139	Roundup PM Prowl H2O Outlook Matrix	Admire Pro Vydate	Quadris Endura Omega 500 Bravo WS Tanos Curzate Manzate
San Luis Valley Colorado (CO)	D. Holm C. Gray K. Zavislan	Late	Pivot	120-60-40-25-2.5Zn	12" x 34"	15-May	2-Sep Sulfuric acid	28-Sep	110	136	Dual Magnum Boundary	Leverage 360 Belay	Quadris Opti Luna Tranquility
Aberdeen Idaho (ID)	J. Stark R. Novy J. Whitworth P. Bain	Late	Sprink.	215-80-7 Zn&Mg	10.6" x 36"	4-May	2-Sep Reglone	24-Sep	121	143	TriCor 4F Matrix Eptam 7-E	Admire	Gavel Bravo
Hermiston Oregon (HRM)	V. Sathuvalli	Early	Pivot	340-290-375-85	9.25" x 34"	25-Mar	22-Jul Reglone	10-Aug	119	138	Matrix Dual-Magnum Vapum	Admire Coragen Agr-Mek	Quadris Ridomil Omega Dithane
Klamath Falls Oregon (KF)	B. Charlton N. Baley	Late	Sprink.	181-125-150-231	9.25" x 36"	14-May	21-Aug Mechanical	17-Sep	99	126	Prowl Matrix Outlook	Alias Movento Transform	Moncut Ridomil/Bravo Manzate Luna
Dalhart Texas (DTX)	J. C. Miller, Jr. J. Koym D. Schuering	Early	Pivot	171-136-13	10.2" x 28"	20-May	20-Aug Mechanical	21-Sep	92	124	Select Max Chateau Brawl Acumen Tricor Marix SG	Beleaf Fulfill Movento Reaper Torac Transform WG	Quadris Penncozeb, Bravo Revus Top Scala SC Luna Tranquility Echo Curzate 60DF Gavel
Springlake Texas (STX)	J. C. Miller, Jr. J. Koym D. Schuering	Early	Pivot	134-34-34	9" x 36"	11-Apr	22-Jul Mechanical	4-Aug	125	130	Sencor Roundup Dual Matrix Stealth	Movento Agrimek Blackhawk Transform Cruiser Maxx	Scala Copper Nucop Tanos

TABLE 2: 2015 Western Regional Chipping Potato Variety Trial - CLONE, PARENTS, FLOWER COLOR, ENTERED BY, YEARS IN TRIAL, SEED SOURCE, STAND, TUBER AND VINE CHARACTERISTICS, AND STEMS PER PLANT

No	Clone	Parents	Flower Color	Entered by	Year in Trial	Seed Source	Mean Stand %	Tuber Shape	Skin	Vine Size	Maturity	Stems/Plant
1	ATLANTIC	WAUSEON B5141-6	Red-purple	Check	Ck	OR	96	2.0 Round	2.1 Buff	3.5 Med-large	3.4 Medium	2.7
2	SNOWDEN	Lenape Wischip	White	Check	Ck	JW	98	2.1 Oval	2.2 Buff	3.7 Med-large	3.4 Medium	3.5
3	AC00206-2W	AC87340-2 Dakota Pearl	White	CO	3	CO	96	1.6 Round	1.5 White	2.6 Medium	3.1 Medium	2.0
4	AC03433-1W	A94322-8C COA96141-4	Light Purple	CO	3	CO	89	1.9 Round	1.5 White	3.2 Med-large	3.9 Med-late	2.5
5	AC03452-2W	A98423-1C COA96141-2C	White	CO	3	CO	94	1.9 Round	1.2 White	3.7 Med-large	3.6 Med-late	2.4
6	AC05153-1W	A91814-5 Chipeta	White	CO	2	CO	93	1.7 Round	1.3 White	3.0 Medium	2.4 Early	3.3
7	OR09256-2	Dakota Diamond Russet Norkotah	White	OR	1	OR	99	1.9 Round	2.7 Buff	3.7 Med-large	3.5 Medium	2.1

1 Numerical values are means of all trial locations. Stand % for Klamath Falls was taken at 30 days.

2 1.0-2.0=Round, 2.1-2.5=Oval, 2.6-3.5=Oblong, 3.6-4.0=Oblong-Long, 4.1-5.0=Long

3 1.0-2.0=White, 2.1-3.0=Light Russet, 3.1-4.0=Medium Russet, 4.1-4.5=Medium Heavy Russet, 4.6-5.0 Heavy Russet

4 1.0-2.5=Small, 2.6-3.0=Medium, 3.1-4.0=Medium-Large, 4.1-4.5=Large, 4.6-5.0=Very Large

5 1.0-2.5=Early, 2.6-3.0=Medium-Early, 3.1-3.5=Medium, 3.6-4.0= Medium-Late, 4.1-4.5=Late, 4.6-5.0=Very Late

TABLE 3: 2015 Western Regional Chipping Potato Variety Trial - TOTAL YIELD - YIELD OF U.S. #1'S (CWT/A & %)

No. Clone	Total Yield (CWT/A)							Entry Mean	Rank	U.S. No. 1's (CWT/A) / %							Entry Mean	Rank
	CA	CO	ID	HRM	KF	DTX	STX			CA	CO	ID	HRM	KF	DTX	STX		
1 ATLANTIC	494	441	436	598	469	361	179	425	3	403	383	356	485	329	319	91	338	3
										81	87	82	81	70	88	51		
2 SNOWDEN	468	396	512	653	550	440	134	450	2	354	236	466	549	415	378	56	350	2
										76	60	91	84	75	86	42		
3 AC00206-2W	460	296	364	458	463	368	192	372	5	361	237	286	359	348	310	89	284	5
										78	80	79	78	75	84	46		
4 AC03433-1W	456	309	375	516	498	251	73	354	6	358	242	250	419	361	217	29	268	6
										79	78	67	81	73	86	39		
5 AC03452-2W	547	388	459	739	663	422	176	485	1	465	321	364	597	502	361	82	385	1
										85	83	79	81	76	85	46		
6 AC05153-1W	392	301	318	473	436	346	138	343	7	281	161	238	320	271	303	67	234	7
										72	53	75	68	62	88	49		
7 OR09256-2	459		475	520	532	416	95	416	4	340		385	327	389	347	31	303	4
										74		81	63	73	83	33		
Location Mean	468	355	420	565	516	372	141			366	263	335	437	374	319	63		
										78	74	79	77	72	86	44		

TABLE 4: 2015 Western Regional Chipping Potato Variety Trial - YIELD OF U.S. #1'S >10 OZ. & YIELD <4OZ. (CWT/A & %)

No. Clone	U.S. No. 1's > 10 OZ (CWT/A) / %								Yield < 4 OZ (CWT/A) / %									
	CA	CO	ID	HRM	KF ¹	DTX	STX	Entry Mean	Rank	CA	CO	ID	HRM	KF	DTX	STX	Entry Mean	Rank
1 ATLANTIC	134	164	200	137	20	63	0	103	1	67	30	27	102	77	42	88	62	6
	27	37	46	23	4	17	0	22	1	13	7	6	17	16	12	49	17	7
2 SNOWDEN	38	22	175	137	15	54	0	63	4	102	155	18	97	108	57	78	88	3
	8	5	34	21	3	12	0	12	5	22	33	4	15	20	13	58	23	3
3 AC00206-2W	115	69	103	57	11	27	0	54	5	57	49	42	91	81	59	104	69	4
	25	23	28	12	2	7	0	14	4	12	16	12	20	17	16	54	21	4
4 AC03433-1W	122	73	129	63	22	55	0	66	3	45	41	24	85	47	35	44	46	7
	27	24	34	12	4	22	0	18	2	10	13	6	16	10	14	61	19	5
5 AC03452-2W	147	57	237	49	58	33	0	83	2	51	60	30	135	52	61	93	69	5
	27	15	52	7	9	8	0	17	3	9	16	7	18	8	15	53	18	6
6 AC05153-1W	47	10	56	45	7	27	0	28	6	102	137	63	126	140	42	71	97	2
	12	3	18	9	2	8	0	7	6	26	46	20	27	32	12	51	31	1
7 OR09256-2	27		110	12	12	0	0	27	7	104		54	190	105	69	64	98	1
	6		23	2	2	0	0	6	7	23		11	37	20	17	67	29	2
Location Mean	79	56	126	63	18	32	0			75	79	37	118	87	52	77	76	
	19	18	34	12	4	11	0			17	22	9	21	18	14	56	23	

TABLE 5: 2015 Western Regional Chipping Potato Variety Trial - SPECIFIC GRAVITY

No. Clone	Specific Gravity							Entry Mean	Rank
	CA	CO	ID	HRM	KF	DTX	STX		
1 ATLANTIC	1.095	1.104	1.095	1.070	1.094	1.079	1.085	1.089	1
2 SNOWDEN	1.091	1.095	1.085	1.071	1.088	1.068	1.071	1.081	3
3 AC00206-2W	1.087	1.092	1.087	1.068	1.082	1.076	1.073	1.081	5
4 AC03433-1W	1.081	1.084	1.082	1.071	1.086	1.074	1.067	1.078	6
5 AC03452-2W	1.073	1.081	1.076	1.057	1.075	1.057	1.054	1.068	7
6 AC05153-1W	1.085	1.088	1.087	1.072	1.084	1.079	1.072	1.081	4
7 OR09256-2	1.093		1.093	1.071	1.093	1.073	1.074	1.083	2
Location Mean	1.086	1.091	1.086	1.068	1.086	1.072	1.071		

TABLE 6: 2015 Western Regional Chipping Potato Variety Trial - AVERAGE TUBER SIZE, AND TUBER SHAPE

No. Clone	Average Tuber Size (oz)							Tuber Shape																	
	CA	ID	HRM	KF	DTX	STX	Entry Mean	Length/ Width	Length/ Width	Length/ Width	Length/ Width	Length/ Width	Entry Mean	Width/ Thick	Width/ Thick	Width/ Thick	Width/ Thick	Entry Mean	(1-5, 1 = round, 5 = long)						Entry Mean
								CA	CO	ID	HRM	KF		CO	HRM	KF	ID		CO	ID	HRM	KF	DTX	STX	
1 ATLANTIC	6.3	8.5	5.6	5.3	4.3	3.2	5.5	1.00	1.09	1.08	0.97	1.01	1.03	1.27	1.28	1.21	1.31	1.27	1.0	2.5	1.6	2.6	2.5	2.0	2.0
2 SNOWDEN	5.1	7.7	5.5	4.9	4.7	2.6	5.1	0.93	0.97	1.01	0.98	0.86	0.95	1.30	1.31	1.28	1.20	1.27	1.0	2.4	1.9	2.1	3.0	2.0	2.1
3 AC00206-2W	6.3	6.0	5.0	4.5	4.2	2.4	4.7	1.00	1.03	0.90	0.94	0.93	0.96	1.13	1.16	1.16	1.11	1.14	1.0	1.9	1.0	1.5	2.0	2.0	1.6
4 AC03433-1W	6.7	7.4	5.3	5.8	4.4	2.2	5.3	0.93	0.98	0.85	0.92	0.84	0.90	1.23	1.15	1.16	1.01	1.14	1.0	2.0	1.4	1.9	2.0	3.0	1.9
5 AC03452-2W	6.8	9.4	5.6	6.6	3.7	2.3	5.7	0.99	1.03	1.03	0.88	0.92	0.97	1.19	1.23	1.21	1.27	1.23	1.0	2.3	1.5	2.5	2.0	2.0	1.9
6 AC05153-1W	4.9	5.0	4.5	3.8	3.9	2.3	4.1	0.97	1.15	1.02	0.94	0.98	1.01	1.26	1.24	1.25	1.30	1.26	1.0	2.0	1.3	1.8	2.0	2.4	1.7
7 OR09256-2	4.9	6.5	4.6	4.5	2.9	1.9	4.2	1.07		1.02	0.95	1.06	1.03		1.23	1.18	1.20	1.20		1.8	1.1	2.3	2.0	2.5	1.9
Location Mean	5.8	7.2	5.2	5.1	4.0	2.4		0.98	1.04	0.99	0.94	0.94		1.23	1.23	1.21	1.20		1.0	2.1	1.4	2.1	2.2	2.3	

TABLE 7: 2015 Western Regional Chipping Potato Variety Trial - EXTERNAL DEFECTS - GROWTH CRACKS, SECOND GROWTH, SHATTER BRUISE, SCAB - MEANS OF LOCATIONS

No. Clone	Growth Cracks ¹								Second Growth ¹								Greening ¹								Shatter Bruise ¹						Scab ¹					
	CA ²	CO	ID	HRM	KF	DTX	STX	Entry Mean	CA ²	CO	ID	HRM	KF	DTX	STX	Entry Mean	CA ²	CO	ID	HRM	KF	DTX	STX	Entry Mean	CA	HRM	KF	DTX	STX	Entry Mean	ID ³	ID	HRM	DTX	STX	Entry Mean
1 ATLANTIC	0.6	4.0	4.0	4.6	4.3	5.0	5.0	4.5	0.3	5.0	4.5	4.6	4.8	5.0	5.0	4.8	4.6	3.0	3.0	4.4	3.8	5.0	5.0	4.0	3.3	4.6	4.8	5.0	5.0	4.4	3.0	4.0	4.5	5.0	5.0	4.6
2 SNOWDEN	0.3	4.0	4.8	5.0	4.5	5.0	5.0	4.7	0.1	5.0	5.0	4.8	5.0	5.0	5.0	5.0	2.3	4.0	0.0	4.6	4.3	5.0	5.0	3.8	3.9	4.5	4.6	5.0	5.0	4.5	3.4	3.0	4.9	5.0	5.0	4.5
3 AC00206-2W	3.0	4.0	4.0	5.0	4.6	5.0	5.0	4.6	0.1	5.0	5.0	4.6	5.0	5.0	5.0	4.9	4.8	4.0	0.0	4.6	4.1	5.0	5.0	3.8	3.5	4.3	4.3	5.0	5.0	4.3	3.6	2.9	4.6	5.0	5.0	4.4
4 AC03433-1W	6.0	2.0	2.3	4.5	3.1	5.0	5.0	3.6	0.1	5.0	5.0	4.6	4.9	5.0	5.0	4.9	5.7	4.0	0.0	4.1	3.9	5.0	5.0	3.7	3.3	4.6	5.0	5.0	5.0	4.5	3.5	4.3	5.0	5.0	5.0	4.8
5 AC03452-2W	2.2	5.0	4.8	5.0	4.5	5.0	5.0	4.9	1.2	5.0	5.0	4.3	5.0	5.0	5.0	4.9	2.2	4.0	0.0	4.9	3.6	5.0	5.0	3.8	3.9	4.9	4.4	5.0	5.0	4.5	3.3	3.5	5.0	5.0	5.0	4.6
6 AC05153-1W	1.0	4.0	4.5	4.8	4.6	5.0	5.0	4.6	0.0	5.0	5.0	4.5	5.0	5.0	5.0	4.9	1.4	4.0	3.0	5.0	4.3	5.0	5.0	4.4	3.1	3.0	3.0	5.0	5.0	3.5	3.0	3.0	4.4	5.0	5.0	4.3
7 OR09256-2	0.7		4.7	5.0	4.5	5.0	5.0	4.8	0.3		5.0	4.9	4.5	5.0	5.0	4.9	1.7		0.0	4.8	3.6	5.0	5.0	3.7	3.9	4.8	4.6	5.0	5.0	4.6	3.4	5.0	4.9	5.0	5.0	5.0
Location Mean	2.0	3.8	4.1	4.8	4.3	5.0	5.0		0.3	5.0	4.9	4.6	4.9	5.0	5.0		3.2	3.8	0.9	4.6	3.9	5.0	5.0		3.5	4.4	4.4	5.0	5.0		3.3	3.7	4.8	5.0	5.0	

¹ Score 1-5, with 1=severe, 5=none.

²Tulelake, CA percent of total

³Aberdeen, ID shatter scores obtained from bruise evaluation conducted using a shatter chamber [1-5(none)].

TABLE 8: 2015 Western Regional Chipping Potato Variety Trial - INTERNAL DEFECTS - HOLLOW HEART PLUS BROWN CENTER,
INTERNAL BROWN SPOT, VASCULAR DISCOLORATION/NET NECROSIS, BLACKSPOT - MEANS OF LOCATIONS

No.	Clone	Percent Hollow Heart plus Brown Center								Percent Internal Brown Spot						Percent Net Necrosis Vascular Discoloration						Blackspot Bruise ¹							
		CA	CO	ID	HRM	KF	DTX	STX	Entry Mean	ID	HRM	KF	DTX	STX	Entry Mean	CA ²	ID	HRM	KF ²	DTX	STX	Entry Mean	CA ³	CO	HRM	DTX	STX	KF ^{3,4}	ID ⁵
1	ATLANTIC	0	2	53	3	0	45	0	15	0	15	0	35	10	12	10	0	0	3	0	0	2	0.0	2.6	3.0	5.0	5.0	0.0	3.0
2	SNOWDEN	0	0	15	3	0	30	0	7	0	5	0	0	0	1	18	0	10	3	0	0	5	0.0	3.5	3.5	5.0	5.0	5.0	1.7
3	AC00206-2W	5	0	3	0	0	23	0	4	0	60	0	8	0	14	20	0	0	3	0	0	4	0.0	4.0	4.5	5.0	5.0	2.5	3.8
4	AC03433-1W	48	0	15	0	0	0	0	9	0	0	0	0	0	0	10	0	5	15	0	0	5	0.0	4.3	4.0	5.0	5.0	2.5	3.8
5	AC03452-2W	0	0	5	3	0	8	0	2	0	0	0	0	0	0	10	0	0	0	0	0	2	0.0	4.9	5.0	5.0	5.0	2.5	4.0
6	AC05153-1W	0	0	8	0	0	0	0	1	0	0	0	0	0	0	13	0	3	3	0	0	3	0.0	4.4	3.5	5.0	5.0	0.0	2.9
7	OR09256-2	3		13	0	0	0	0	3	0	0	0	0	0	0	18	0	0	0	0	0	3	0.0		2.5	5.0	5.0	5.0	2.3
Location Mean		8	0	16	1	0	15	0	6	0	11	0	6	1		14	0	3	4	0	0		0.0	3.9	3.7	5.0	5.0	2.5	3.1

¹ Score 1-5, with 1=severe, 5=none.

² Net Nec/VD combined with Stem End Browning

³ Percent of total

⁴ Klamath Falls, OR blackspot bruise includes impact bruise

⁵ Aberdeen, ID blackspot scores from an abrasive peel test [1-5(none)].

TABLE 9: 2015 Western Regional Chipping Potato Variety Trial - CHIP COLOR

Clone	HRM ¹	CO ¹				ID ²			50 ³ Mean
	Chip 50 c	Chip 40 a	Recon ^b	Chip 50 c	Recon ^d	Chip 40 a	Recon ^b	Chip 50 c	
1 ATLANTIC	2.0	4.0	4.5	2.5	3.0	4.8	2.6	4.6	3.5
2 SNOWDEN	1.8	5.0	4.0	3.0	1.5	4.5	2.0	4.1	3.5
3 AC00206-2W	1.8	2.0	2.5	2.0	1.0	3.3	2.3	3.1	2.5
4 AC03433-1W	1.5	2.5	4.0	1.5	3.0	3.3	2.5	3.3	2.4
5 AC03452-2W	1.6	3.5	4.0	1.5	1.0	3.5	2.6	3.4	2.5
6 AC05153-1W	1.5	3.0	4.0	2.0	2.5	3.8	2.0	2.8	2.4
7 OR09256-2	1.9					5.0	2.8	4.8	4.8
Location Means	1.7	3.3	3.8	2.1	2.0	4.0	2.4	3.7	

¹ Color using Snack Food Association Color Standards for Potato Chips 1999 (1-5(darkest)).

² Color using Snack Food Association Color Standards for Potato Chips 2008 (1-6(darkest)).

^a Stored 5 weeks (CO) at 40°F and 6 weeks (ID) at 45°F.

^b Stored 5 weeks (CO) at 40°F plus 3 weeks at 60°F; stored 6 weeks (ID) at 40°F plus 3 weeks at 60°F.

^c Stored 5 weeks (CO), 9 weeks (ID) at 50°F and stored 16 weeks (HRM) at 47°F.

^d Stored 5 weeks (CO) at 50°F plus 3 weeks at 60°F; stored 10 weeks (HRM) at 50°F plus 3 weeks at 50-55°F.

³ Mean for CO and ID

Table 10. 2015 Western Regional Chipping Potato Variety Trial - SOLIDS, DEXTROSE, SUCROSE, PROTEIN, VITAMIN C, GLYCOALKALOIDS (ABERDEEN, IDAHO) AND ANTIOXIDANT EQUIVALENTS (SPRINGLAKE, TEXAS)

Clone	Solids Oven Dry (%)	Sugars		Protein (%DWB)	Vitamin C (mg/100g FWB)	Glycoalkaloids (mg/100gFWB)	Antioxidant Equivalents ¹	
		Dextrose (%FWB)	Sucrose (%FWB)				µg Ascorbic Acid equivalents/gfw ²	µg Trolox equivalents/gfw ³
1 Atlantic	22.3	0.009	0.138	7.03	26.0	3.7	156.9	133.8
2 Snowden	21.4	0.008	0.125	6.46	26.5	4.4	309.4	268.2
3 AC00206-2W	21.1	0.002	0.095	7.51	22.3	2.3	203.5	174.9
4 AC03433-1W	21.2	0.003	0.112	7.77	23.0	2.8	145.2	123.4
5 AC03452-2W	18.8	0.011	0.091	7.53	23.8	4.8	178.1	152.4
6 AC05153-1W	21.6	0.002	0.115	8.05	25.9	1.7	180.9	154.9
7 OR09256-3	23.5	0.009	0.179	6.31	30.5	7.2	326.0	282.8
Means	21.4	0.006	0.122	7.24	25.4	3.8	214.3	184.4

FWB = fresh weight basis DWB = dry weight basis

Glycoalkaloids: The 2014 Lenape check from Aberdeen was 32.0 mg/100g

Desirable levels of Dextrose are ≤ 0.05%

Sucrose levels of ≤ 0.15% are excellent, 0.16-2.0% are good, and ≥ 2.1% are fair to poor

¹The assay used at Texas A&M University was based on "Use of a Free Radical Method to Evaluate Antioxidant Activity" by Brand-Williams, et al. 1995, Lebensm. Wiss. Technol. 28:25-30.

Antioxidants soluble in methonal were extracted and allowed to react with the stable radical, 2,2-Diphenyl-1-picrylhydrazyl (DPPH).

This provided a rapid evaluation of the antioxidant properties of the potato extracts based on absorbance.

²µg Ascorbic acid equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation: $y=860.86x-8.803$

³µg Trolox equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation: $y=758.56x-12.274$

TABLE 11: 2015 Western Regional Chipping Potato Variety Trial - DISEASE EVALUATIONS, METRIBUZIN REACTION

No. Clone	Vert. Wilt/Early Dying				Early Blight				Common Scab		% Net Necrosis/ vascular discoloration ¹		Rhizoc.	Pecto- bacterium	Metr.
	AB ¹		HERM		Foliar		Tuber AB ¹		% Serious		Incidence (%)	% Serious Defect	KLAM ³ (1-5=none) ³	Soft Rot ² AB	Reaction AB ²
	(0-9)*	AUDPC	(0-9)*	AUDPC	(0-9)*	AUDPC	Incidence (%)	% Serious Defect	Incidence	Defect					
1 Atlantic	5.3	228	8.0	1388	5.7	303	0	4	5.0	1.3	48	18	3.9	0.4	MR
2 Snowden	6.0	368	4.5	162	5.3	286	0	0	6.7	0.0	43	0	1.0	0.1	MR
3 AC00206-2W	6.3	329	6.5	547	7.3	665	2	0	44.8	22.1	69	6	4.3	0.5	R
4 AC03433-1W	5.3	170	2.0	50	6.7	356	0	0	15.4	7.0	36	0	4.6	0.4	R
5 AC03452-2W	4.3	130	4.0	189	5.0	180	0	0	8.2	5.2	36	0	4.5	0.4	R
6 AC05153-1W	9.0	893	8.5	1246	8.7	910	0	0	38.1	16.0	37	0	4.3	1.0	MR
7 OR09256-2	7.3	611	4.8	146	7.7	671	0	0	8.9	2.7	38	0	4.0	2.3	MR
MEANS	6.2	390	5	533	6.6	482	0	1	18.2	7.8	44	3	3.8	0.7	
LSD @ .05	1.6				1.3		11	7	16.4	7.1	24	17	0.6	1.3	

* days after planting (121 at Aberdeen, 134 at Hermiston)

¹ Evaluations made at Aberdeen, Idaho by Jonathan Whitworth, Hermiston, Oregon by Laurie LaRoux, Tulelake by Darrin Culp; scale as indicated with highest number being most severe. For 0 to 9: 0=no symptoms; 1= trace; 2=1-5%; 3=5-10%; 4=10-20%; 5=25-40%; 6=40-60%; 7=60-70%; 8=75-90%; 9=90-100% dead or dying with typical disease symptoms.

Early Blight and Vert. Wilt AUDPC: Area Under the Disease Progress Curve based on foliar readings taken 3 separate days after planting.

Common Scab and Net Necrosis serious defects are the number of tubers with a 3 rating (0-5 scale) or higher, divided by the total number of tubers examined. Net necrosis data from PLRV-infected plots.

² For 0 to 5: 0=none, 5=severe as a combination of tuber area and degree impacted by Fusarium and Pectobacterium inoculations.

Metribuzin Reaction measured at Aberdeen, ID. VR=very resistant, R=Resistant, MR=Moderately resistant, MS=moderately susceptible, S=susceptible VS=very susceptible

³ *Rhizoctonia solani* readings made by Brian Charlton, Klamath Falls, Oregon; scale as indicated with lowest number being most severe

TABLE 12: 2015 Western Regional Chipping Potato Variety Trial - MERIT SCORES (1-5(best))

No.	Clone	Fresh Merit							Process Merit			
		CA	CO	HRM	ID	DTX	STX	Entry Mean	CO	ID	HRM	Entry Mean
1	ATLANTIC	3.5	3.0	1.0	2.0	3.9	3.5	2.7	3.0	2.5	2.5	2.7
2	SNOWDEN	3.8	3.0	1.5	2.1	3.8	3.7	2.7	2.0	3.0	3.0	2.7
3	AC00206-2W	3.6	2.0	2.0	3.4	3.9	3.8	2.9	4.0	3.5	3.0	3.5
4	AC03433-1W	3.4	2.0	1.0	1.7	3.6	2.0	2.5	3.0	3.5	2.0	2.8
5	AC03452-2W	3.9	4.0	1.5	2.4	3.5	3.4	2.5	5.0	3.5	3.0	3.8
6	AC05153-1W	3.2	1.0	2.0	2.9	3.6	3.1	2.7	2.0	4.0	3.5	3.2
7	OR09256-2	3.8		2.0	3.6	4.0	3.6	2.9		2.0	3.0	2.5
Location Mean		3.6	2.5	1.6	2.6	3.7	3.3		3.2	3.1	2.9	

TABLE 13: 2015 Western Regional Chipping Potato Variety Trial - SUMMARY

No.	Clone	Year in Trial	Total Yield ¹ Rank	US#1's Yield ¹ %	Tuber Size (oz)	Specific Gravity	Chip Color ²	Process Merit Score
1	ATLANTIC	CK	425	338 77	5.5	1.089	3.5	2.7
2	SNOWDEN	CK	450	350 73	5.1	1.081	3.5	2.7
3	AC00206-2W	3	372	284 74	4.7	1.081	2.5	3.5
4	AC03433-1W	3	354	268 72	5.3	1.078	2.4	2.8
5	AC03452-2W	3	485	385 76	5.7	1.068	2.5	3.8
6	AC05153-1W	2	343	234 67	4.1	1.081	2.4	3.2
7	OR09256-2	1	416	303 68	4.2	1.083	4.8	2.5

¹ (CWT/A)²Mean for CO and ID stored at 50°F

TABLE 14: 2015 Western Regional Chipping Potato Variety Trial - 3 Year Summary of Graduating Entries

Clone	2013					2014					2015				
	Total Yield ¹ Rank	US#1's Yield ¹ %	Specific Gravity	Chip Color ²	Merit Score	Total Yield ¹ Rank	US#1's Yield ¹ %	Specific Gravity	Chip Color ²	Merit Score	Total Yield ¹ Rank	US#1's Yield ¹ %	Specific Gravity	Chip Color ²	Merit Score
ATLANTIC	425 4	333 79	1.089	2.1	3.0	410 4	325 78	1.086	2.5	2.8	425 3	338 77	1.089	3.5	2.7
CHIPETA	395 8	321 82	1.079	1.9	2.8	413 3	334 81	1.077	2.3	2.7					
AC00206-2W	385 9	303 78	1.082	1.0	4.0	383 6	302 79	1.079	1.5	3.6	372 5	284 74	1.081	2.5	3.5
AC03433-1W ⁴	350 11	264 76	1.079	1.3	2.9	418 8	343 79	1.081	1.7	2.7	354 6	268 72	1.078	2.4	2.8
AC03452-2W	470 1	373 79	1.074	1.3	3.9	456 2	360 77	1.069	1.5	3.7	485 1	385 76	1.068	2.5	3.8
Trial Mean	414	312 75	1.083	1.5	3.3	416	330 78	1.080	1.9	3.3	417	319 73	1.080	3.1	3

3 Year Average (2013-2015)

Clone	Total Yield ¹	US#1's				Merit Score	Noted Weaknesses	Noted Strengths
		Yield ¹ %	Specific Gravity	Chip Color ²	Merit Score			
ATLANTIC	420	332 78	1.088	2.7	2.8			
CHIPETA	368	344 79	1.078	2.1	2.8			
AC00206-2W	433	296 77	1.081	1.7	3.7	Low total yield (3/3), low % US#1 (2/3), Common Scab (3/3)	Chip color (2/3), low sucrose (3/3), soft rot resist (2/3)	
AC03433-1W	374	320 76	1.079	1.8	2.8	Low total yield (3/3), low solids (3/3)	High protien (3/3), vert wilt resist (3/3), soft rot resist (2/3)	
AC03452-2W	470	373 77	1.070	1.7	3.8	Low solids (3/3)	High total yield (3/3), high % US#1s (2/3), chip color (2/3), low sucrose (3/3), soft rot resist (3/3)	
Mean ³	416	320 75	1.081	2.2	3.2			

¹(CWT/A)²Mean for CO and ID stored at 50°F³Mean includes all trial entries 2013-2015⁴Data in 2014 table is from 2012

Comments and Information from States

Hermiston, Oregon ¹			Sugar Ends ²	Tuber/plant	Sprouting (1-9 none)	Eye Depth (1-5 shal.)	Shape unif (1-5 uniform)
1	ATLANTIC	Rot x4, Sticky, FBE, Flakey x 2	0.0	8.6	9.0	3.3	3.8
2	SNOWDEN	Flakey x4, FBE, Deep Eyes, Rhizoc x1	0.0	9.5	9.0	2.6	3.6
3	AC00206-2W	Alligator x1, Shatter Bruise, Russetting, Flakey x1	0.0	7.3	8.8	4.0	4.3
4	AC03433-1W	Pear x2, Sticky x2, Sprouting x2. Skinning x2	0.0	8.0	7.5	3.8	4.0
5	AC03452-2W	FBE, triangular, pear, chain	0.0	10.7	9.0	3.0	3.5
6	AC05153-1W	Lenticels, Shatter bruise, dotted, rot, pear	0.0	8.4	9.0	3.6	3.9
7	OR09256-2	Dotty, chain, rot x1	0.0	9.6	8.8	3.6	4.0
Tulelake, California			Tuber/plant	Shape Uniformity ³	Eye Depth (1-5 shal.)	% hard bite	
1	ATLANTIC		7.3	3.6	3.5	7.5	
2	SNOWDEN		8.7	3.5	3.1	0.0	
3	AC00206-2W		7.0	3.8	3.6	0.0	
4	AC03433-1W		7.5	3.6	3.1	0.0	
5	AC03452-2W		7.8	3.6	2.9	0.0	
6	AC05153-1W		7.8	3.5	3.3	2.1	
7	OR09256-2		8.7	3.6	3.5	0.0	
Aberdeen, Idaho Comments ⁵			Sugar Ends ²	Metribuzin			
1	ATLANTIC	rot, lumpy, deep ends, green, misshapen	0	MR			
2	SNOWDEN	deep eyes, scab, Ats	0	MR			
3	AC00206-2W	uniform, small,	3	R			
4	AC03433-1W	big, deep ends, misshapen	0	R			
5	AC03452-2W	big, deep ends, misshapen	3	R			
6	AC05153-1W	green, shatter	0	MR			
7	OR09256-2	uniform, round	0	MR			

¹FBE=folded bud end

²Sugar ends in percent

³1-5, 5=very uniform

⁴Area Under Disease Product Curve. Based on readings taken 80, 92, 99 days after planting. Higher reading=more susceptible.

⁵Ats = Attached stolons

***Hermiston, Oregon reported hot summer temperatures**

****Tulelake, California reported warmer than normal growing season**

Comments and Information from States

Klamath Falls, Oregon Comments			% SEB ¹	% HB ²	
1	ATLANTIC	irregular shape, irregular size, mice damage, folded bud end, low set, lent scaring, pears, russeting	0	1.9	
2	SNOWDEN	folded bud end x2, dark x2, flat, small, russeting, sticky stolon x2	1	1.9	
3	AC00206-2W	nice x2, lenticel scaring x2, russeting, blotchy skin, ok, looks good	1	0.6	
4	AC03433-1W	folded bud end, sticky stolon, dark ugly, low set, growth crack x2, lent scaring x2, misshape	3	0.6	
5	AC03452-2W	folded bud end x4, misshape x2, smooth x3, flat x2, dents	0	0.0	
6	AC05153-1W	light skin, flat, lenticel scaring x3, small x2, blotchy, shatter bruise, mice damage	1	0.0	
7	OR09256-2	pears, mechanical damage x2, dark, misshape, pointy stem end	0	1.25	
Dalhart, Texas Comments			Zebra Defect	Chip Color ³	Notes ⁴
1	ATLANTIC	yield+, hollow heart, nice shape, poor internals	5%	2.0	
2	SNOWDEN	nice size, browncenter, hollow heart	5%	1.0	keep
3	AC00206-2W	uniform, internal brownspot, nice shape, poor internals	6%	1.0	keep
4	AC03433-1W	nice, light set, nice shape	5%	1.0	1gh, 1 im, drop
5	AC03452-2W	rough,	5%	1.0	keep
6	AC05153-1W	uniform, some flat	5%	1.0	drop
7	OR09256-2	Best of Trial, nice size, small, nice flesh	5%	1.0	3IBS, 7IM, drop
Springlake, Texas Comments ⁴			Zebra Defect	Chip Color ³	Notes ⁴
1	ATLANTIC	buff, nice yield, light set, internal brownspot, nice shape, poor internals, uniform, keep	3%	1.0	9scab
2	SNOWDEN	smooth, nice shape and size, heavy yield, variable size	2%	2.0	2scab
3	AC00206-2W	nice size and shape, smooth, nice flesh	0%	1.0	BOT
4	AC03433-1W	small, light set, ZC, low yield, poor yield, variable size	3%	1.0	
5	AC03452-2W	smooth, nice shape, low yield, small, variable size, drop	3%	2.0	Yellow
6	AC05153-1W	nice shape, nice flesh, low yield, nice, keep, Best of Trial	3%	1.0	
7	OR09256-2	nice size, and shape, nice flesh low yield, keep	3%	1.0	9scab, yellow

¹SEB=Stem end browning

²HB=Hard bite

³1=light, 3+=very dark

⁴BOT=Best Of Trial, IBS=internal brownspot, IM=immature, ZC=zebra chip

***Dalhart, Texas reported higher than normal precipitation during the growing season.**

****Springlake, Texas reported above average precipitation May, June, July and August.
There was a freeze May 14th.**