

2005  
WESTERN REGIONAL CHIPPING  
POTATO VARIETY TRIAL REPORT

State Experiment Stations and  
USDA-ARS

California  
Colorado  
Idaho

Oregon  
Texas  
Washington

## 2005 WESTERN REGIONAL CHIPPING POTATO VARIETY TRIAL REPORT

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Compiled by Peggy Bain

TABLE 1: 2005 Western Regional Chipping Potato Variety Trial - LOCATIONS, COOPERATORS, AND CULTURAL INFORMATION

Locations	Cooperators	Trial	Irrigation	Fertilizer N-P-K-S(lb/A)	Planting Date	Vine Kill Date	Harvest Date	Days to Vine Kill	Days to Harvest	Herbicides	Insecticides	Fungicides
Tulelake California <b>(CA)</b>	H. Carlson D. Kirby	Late	Sprink.	194-234-0	30-May	18-Sep	11-Oct	111	134	Matrix Lexone df	Pounce	Maxim Quadris Curzate Bravo Dithane 45 Echo Manzate
San Luis Valley Colorado <b>(CO)</b>	D. Holm P. Naranjo	Late	Pivot	120-60-40-25	13-May	2-Sep	22-Sep	112	132	Dual Magnum	Leverage	Amistar
Aberdeen Idaho <b>(ID)</b>	J. Stark R. Novy J. Whitworth P. Bain M. Chappell	Late	Sprink.	210-100-100	27-Apr	6-Sep	30-Sep	132	156	Sencor DF Matrix Eptam	Admire 2F	Curzate Dithane DF
Corvallis Oregon <b>(CV)</b>	I. Vales A Mosley S. Yilma	Late	Sprink.	150-150-150-90	23-May	10-Sep	26-Sep	110	126	Matrix Prowl	Thimet Provado	Bravo Dithane Quadris
Hermiston Oregon <b>(HRE)</b>	D. Hane, L. Leroux	Early	Pivot	260-80-175-40	24-Mar	12-Jul	26-Jul	110	124	Eptam Matrix Enquik	Mocap Admire Asana Monitor	Vapam Maxim 4FS Ridomil Gold Quadris Bravo Dithane
Hermiston Oregon <b>(HRL)</b>	D. Hane, L. Leroux	Late	Pivot	330-80-175-40	6-Apr	30-Aug	12-Sep	146	159		(Agrimek - mites)	
Klamath Falls Oregon <b>(KF)</b>	K. Rykbost, B. Charlton	Late	Sprink.	160-80-80-140	25-May	15-Sep	7-Oct	113	135	Dual Prowl Matrix	Admire Monitor Telone II	TopsMZ Quadris Dithane Bravo Ridomil Gold
Dalhart Texas <b>(TX)</b>	J. C. Miller, Jr. J. Koym D. Schuering	Early	Pivot	300-0-0-0-43	21-May	14-Sep	24-Oct	116	156	Spartan 4F Dual Arrow Matrix Reglone	Mustang Max Baythroid Dimethoate Asana Leverage Avaunt Inergy Spintor Actara Dynamic	Tanos Echo Endura Scala

Daily high and low temperatures were normal throughout the growing season. Precipitation was lower than normal for May, the first, third, and forth weeks of June, July and the first week of August

TABLE 2: 2005 Western Regional Chipping Potato Variety Trial - CLONE, PARENTS, ENTERED BY, 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	V Lt Red-purple	Check	Ck	OR	94	1.6	Oval	2.1	Buff	2.8	Medium	3.0	Med Early	3.2
2	CHIPETA	WNC612-13 WISCHIP	Med Red-purple	Check	Ck	OR	95	2.1	Oblong	1.5	White	3.9	Med-large	3.9	Med--late	3.2
3	IVORY CRISP	ND292-1 A77268-4	White	Check	1	OR/ID	92	1.5	Round	1.2	White	2.5	Small	3.0	Med Early	3.8
4	A91814-5	NDA2031-2 Ivory Crisp	Red-purple	ID	3	OR	96	2.3	Oblong	1.3	White	3.9	Med-large	3.4	Medium	4.6
5*	B0766-3T	B0243-18 Coastal Chip	White	MD	2	MD	95	2.0	Oval	1.9	White	3.6	Med-large	3.7	Med--late	3.2
6	CO95051-7W	AC88456-6W BC0894-2W	Purple	CO	2	OR	91	1.7	Oval	1.3	White	3.1	Med-large	3.4	Medium	3.2
7	CO96141-4W	BC 894-2 AC87340-2	White	CO	1	CO	94	2.2	Oblong	1.3	White	2.4	Small	3.0	Med Early	3.7
8	COA96141-2C	BC0894-2 AC73340-2	White	ID	2	OR	92	1.6	Oval	1.1	White	3.5	Med-large	3.5	Medium	4.0
9	COA96142-3C	BC0894-2 Ivory Crisp	Red-purple	ID	2	OR	94	1.4	Round	1.2	White	3.0	Medium	3.3	Medium	3.0

\* National Trial Entries

TABLE 3: 2005 Western Regional Chipping Potato Variety Trial - TOTAL YIELD (CWT/A) - EARLY &amp; LATE HARVEST

No. Clone	Total Yield - Early Harvest (CWT/A)				Total Yield - Late Harvest (CWT/A)						Entry Mean	Rank
	HRE	TX	Entry Mean	Rank	CA	CO	ID	CV	KF	HRL		
1 ATLANTIC	619	343	<b>481</b>	<b>5</b>	524	473	377	363	552	972	<b>544</b>	<b>5</b>
2 CHIPETA	600	282	<b>441</b>	<b>8</b>	451	587	507	477	592	1303	<b>653</b>	<b>2</b>
3 IVORY CRISP	611	281	<b>446</b>	<b>7</b>	423	395	360	314	559	913	<b>494</b>	<b>9</b>
4 A91814-5	708	-	<b>708</b>	<b>1</b>	480	632	586	386	699	1261	<b>674</b>	<b>1</b>
5 B0766-3T	655	375	<b>515</b>	<b>4</b>	494	538	518	471	593	1134	<b>625</b>	<b>3</b>
6 CO95051-7W	617	120	<b>369</b>	<b>9</b>	405	469	432	305	459	940	<b>502</b>	<b>8</b>
7 CO96141-4W	598	670	<b>634</b>	<b>2</b>	502	429	360	380	517	840	<b>505</b>	<b>7</b>
8 COA96141-2C	647	430	<b>539</b>	<b>3</b>	524	450	531	412	567	1016	<b>583</b>	<b>4</b>
9 COA96142-3C	562	395	<b>478</b>	<b>6</b>	428	480	441	356	567	854	<b>521</b>	<b>6</b>
<b>Location Means</b>	<b>624</b>	<b>362</b>	<b>512</b>		<b>470</b>	<b>495</b>	<b>457</b>	<b>385</b>	<b>567</b>	<b>1026</b>	<b>567</b>	
<b>LSD (.05)</b>			<b>NS</b>								<b>82</b>	

TABLE 4: 2005 Western Regional Chipping Potato Variety Trial - YIELD OF U.S. #1'S (CWT/A &amp; %) - EARLY &amp; LATE HARVEST

No. Clone	U.S. No. 1's - Early Harvest (CWT/A) / %				U.S. No. 1's - Late Harvest (CWT/A) / %						Entry Mean	Rank
	HRE	TX	Entry Mean	Rank	CA	CO	ID	CV	KF	HRL		
1 ATLANTIC	517	318	<b>417</b>	<b>4</b>	467	412	291	161	491	839	<b>444</b>	<b>5</b>
	84	93	<b>88</b>	<b>3</b>	89	87	77	44	89	86	<b>79</b>	<b>6</b>
2 CHIPETA	546	208	<b>377</b>	<b>7</b>	395	521	449	240	482	1213	<b>550</b>	<b>1</b>
	91	74	<b>82</b>	<b>6</b>	88	89	89	50	81	93	<b>82</b>	<b>4</b>
3 IVORY CRISP	363	264	<b>314</b>	<b>8</b>	353	281	247	151	492	715	<b>373</b>	<b>9</b>
	59	94	<b>77</b>	<b>7</b>	83	71	69	48	88	78	<b>73</b>	<b>8</b>
4 A91814-5	393	-	<b>393</b>	<b>6</b>	363	445	421	207	560	829	<b>471</b>	<b>4</b>
	56	-	<b>56</b>	<b>9</b>	76	71	72	54	80	66	<b>70</b>	<b>9</b>
5 B0766-3T	588	335	<b>461</b>	<b>2</b>	461	407	467	254	538	1066	<b>532</b>	<b>2</b>
	90	89	<b>89</b>	<b>2</b>	93	76	90	54	91	94	<b>83</b>	<b>1</b>
6 CO95051-7W	449	76	<b>262</b>	<b>9</b>	322	411	348	200	393	833	<b>418</b>	<b>7</b>
	73	63	<b>68</b>	<b>8</b>	80	88	81	66	86	89	<b>81</b>	<b>5</b>
7 CO96141-4W	525	636	<b>580</b>	<b>1</b>	441	381	279	237	463	739	<b>423</b>	<b>6</b>
	88	95	<b>91</b>	<b>1</b>	88	89	78	62	90	88	<b>82</b>	<b>3</b>
8 COA96141-2C	521	399	<b>460</b>	<b>3</b>	483	404	434	215	522	902	<b>493</b>	<b>3</b>
	81	93	<b>87</b>	<b>4</b>	92	90	82	52	92	89	<b>83</b>	<b>2</b>
9 COA96142-3C	424	366	<b>395</b>	<b>5</b>	355	341	338	153	503	737	<b>404</b>	<b>8</b>
	75	93	<b>84</b>	<b>5</b>	83	71	77	43	89	86	<b>75</b>	<b>7</b>
Location Means	<b>481</b>	<b>325</b>	<b>407</b>		<b>404</b>	<b>400</b>	<b>364</b>	<b>202</b>	<b>494</b>	<b>875</b>	<b>439</b>	
	<b>77</b>	<b>87</b>	<b>80</b>		<b>86</b>	<b>81</b>	<b>79</b>	<b>53</b>	<b>87</b>	<b>85</b>	<b>80</b>	
LSD (.05)				<b>NS</b>							<b>82</b>	

TABLE 5: 2005 Western Regional Chipping Potato Variety Trial - YIELD &gt; 10/12 OZ (CWT/A &amp; %) - EARLY &amp; LATE HARVEST

No. Clone	U.S. No. 1's > 10/12 OZ - Early Harvest (CWT/A) / %				U.S. No. 1's > 10/12 OZ - Late Harvest (CWT/A) / %						Entry Mean	Rank
	HRE	TX	Entry Mean	Rank	CA	CO	ID*	CV*	KF	HRL		
1 ATLANTIC	103	154	<b>128</b>	<b>4</b>	123	144	16	77	315	388	<b>177</b>	<b>3</b>
	17	45	<b>31</b>	<b>4</b>	37	30	4	21	57	40	<b>32</b>	<b>3</b>
2 CHIPETA	51	75	<b>63</b>	<b>7</b>	235	183	217	146	285	960	<b>338</b>	<b>1</b>
	9	26	<b>17</b>	<b>7</b>	52	31	43	31	48	74	<b>46</b>	<b>1</b>
3 IVORY CRISP	7	189	<b>98</b>	<b>6</b>	123	44	3	39	194	98	<b>83</b>	<b>8</b>
	1	67	<b>34</b>	<b>3</b>	29	11	1	12	35	11	<b>16</b>	<b>7</b>
4 A91814-5	2	-	<b>2</b>	<b>9</b>	104	144	33	64	156	73	<b>96</b>	<b>7</b>
	0	-	<b>0</b>	<b>9</b>	22	23	6	17	22	6	<b>16</b>	<b>8</b>
5 B0766-3T	102	212	<b>157</b>	<b>2</b>	281	95	131	151	323	651	<b>272</b>	<b>2</b>
	16	56	<b>36</b>	<b>2</b>	57	18	25	32	54	57	<b>41</b>	<b>2</b>
6 CO95051-7W	7	11	<b>9</b>	<b>8</b>	35	145	11	26	37	131	<b>64</b>	<b>9</b>
	1	9	<b>5</b>	<b>8</b>	9	31	3	9	8	14	<b>12</b>	<b>9</b>
7 CO96141-4W	52	352	<b>202</b>	<b>1</b>	180	104	6	61	138	223	<b>119</b>	<b>6</b>
	9	52	<b>31</b>	<b>5</b>	36	24	2	16	27	27	<b>22</b>	<b>6</b>
8 COA96141-2C	34	162	<b>98</b>	<b>5</b>	250	120	32	59	145	250	<b>143</b>	<b>4</b>
	5	38	<b>22</b>	<b>6</b>	48	27	6	14	26	25	<b>24</b>	<b>4</b>
9 COA96142-3C	21	271	<b>146</b>	<b>3</b>	184	63	35	49	194	201	<b>121</b>	<b>5</b>
	4	69	<b>36</b>	<b>1</b>	43	13	8	14	34	24	<b>23</b>	<b>5</b>
<b>Location Means</b>	<b>42</b>	<b>178</b>	<b>100</b>		<b>168</b>	<b>116</b>	<b>54</b>	<b>75</b>	<b>199</b>	<b>331</b>	<b>140</b>	
	<b>8</b>	<b>41</b>	<b>23</b>		<b>35</b>	<b>23</b>	<b>13</b>	<b>19</b>	<b>34</b>	<b>30</b>	<b>25</b>	
<b>LSD (.05)</b>				<b>NS</b>							<b>127</b>	

\* &gt;12 oz.

TABLE 6: 2005 Western Regional Chipping Potato Variety Trial - YIELD &lt; 4 OZ (CWT/A &amp; %) - EARLY &amp; LATE HARVEST

No. Clone	Yield < 4 OZ - Early Harvest (CWT/A) / %				Yield < 4 OZ - Late Harvest (CWT/A) / %						Entry Mean	Rank
	HRE	TX	Entry Mean	Rank	CA	CO	ID	CV	KF	HRL		
1 ATLANTIC	91	25	<b>58</b>	<b>3</b>	41	59	77	6	16	85	<b>47</b>	<b>3</b>
	15	7	<b>11</b>	<b>3</b>	8	12	20	2	3	9	<b>9</b>	<b>4</b>
2 CHIPETA	47	74	<b>61</b>	<b>4</b>	27	60	19	11	11	40	<b>28</b>	<b>1</b>
	8	26	<b>17</b>	<b>6</b>	6	10	4	2	2	3	<b>5</b>	<b>1</b>
3 IVORY CRISP	244	17	<b>131</b>	<b>8</b>	58	113	110	11	48	175	<b>86</b>	<b>8</b>
	40	6	<b>23</b>	<b>7</b>	14	29	31	3	9	19	<b>17</b>	<b>9</b>
4 A91814-5	307	-	<b>307</b>	<b>9</b>	89	155	113	19	62	271	<b>118</b>	<b>9</b>
	43	-	<b>43</b>	<b>9</b>	19	24	19	5	9	21	<b>16</b>	<b>8</b>
5 B0766-3T	64	27	<b>45</b>	<b>1</b>	17	128	32	9	20	48	<b>42</b>	<b>2</b>
	10	7	<b>8</b>	<b>2</b>	3	24	6	2	3	4	<b>7</b>	<b>2</b>
6 CO95051-7W	167	38	<b>102</b>	<b>7</b>	78	55	81	11	65	103	<b>66</b>	<b>7</b>
	27	32	<b>29</b>	<b>8</b>	19	12	19	4	14	11	<b>13</b>	<b>7</b>
7 CO96141-4W	67	34	<b>51</b>	<b>2</b>	50	43	77	11	38	69	<b>48</b>	<b>5</b>
	11	5	<b>8</b>	<b>1</b>	10	10	21	3	7	8	<b>10</b>	<b>5</b>
8 COA96141-2C	124	31	<b>78</b>	<b>6</b>	23	42	86	9	35	93	<b>48</b>	<b>4</b>
	19	7	<b>13</b>	<b>4</b>	4	9	16	8	6	9	<b>9</b>	<b>3</b>
9 COA96142-3C	115	29	<b>72</b>	<b>5</b>	28	130	68	11	42	93	<b>62</b>	<b>6</b>
	20	7	<b>14</b>	<b>5</b>	7	27	15	9	7	11	<b>13</b>	<b>6</b>
<b>Location Means</b>	<b>136</b>	<b>34</b>	<b>100</b>		<b>46</b>	<b>87</b>	<b>74</b>	<b>11</b>	<b>37</b>	<b>109</b>	<b>61</b>	
	<b>22</b>	<b>12</b>	<b>19</b>		<b>10</b>	<b>18</b>	<b>17</b>	<b>4</b>	<b>7</b>	<b>11</b>	<b>11</b>	
<b>LSD (.05)</b>				<b>NS</b>							<b>34</b>	



TABLE 7: 2005 Western Regional Chipping Potato Variety Trial - SPECIFIC GRAVITY

Specific Gravity - Early & Late Harvest										
No. Clone	HRE	CA	CO	ID	CV	KF	HRL	TX	Entry Mean	Rank
1 ATLANTIC	1.079	1.097	1.098	1.093	1.089	1.081	1.082	1.072	<b>1.086</b>	<b>2</b>
2 CHIPETA	1.074	1.077	1.099	1.086	1.088	1.082	1.074	1.057	<b>1.080</b>	<b>7</b>
3 IVORY CRISP	1.079	1.095	1.095	1.093	1.083	1.084	1.078	1.066	<b>1.084</b>	<b>5</b>
4 A91814-5	1.076	1.090	1.099	1.100	1.089	1.086	1.081	-	<b>1.089</b>	<b>1</b>
5 B0766-3T	1.069	1.082	1.103	1.093	1.098	1.088	1.077	1.064	<b>1.084</b>	<b>4</b>
6 CO95051-7W	1.074	1.095	1.104	1.098	1.087	1.086	1.080	1.063	<b>1.086</b>	<b>3</b>
7 CO96141-4W	1.074	1.081	1.092	1.081	1.076	1.075	1.067	1.066	<b>1.077</b>	<b>8</b>
8 COA96141-2C	1.068	1.076	1.078	1.083	1.075	1.070	1.068	1.058	<b>1.072</b>	<b>9</b>
9 COA96142-3C	1.071	1.088	1.100	1.088	1.084	1.080	1.073	1.068	<b>1.082</b>	<b>6</b>
<b>Location Means</b>	<b>1.074</b>	<b>1.087</b>	<b>1.096</b>	<b>1.091</b>	<b>1.085</b>	<b>1.081</b>	<b>1.076</b>	<b>1.064</b>	<b>1.077</b>	
<b>LSD (.05)</b>									<b>0.004</b>	



TABLE 9: 2005 Western Regional Chipping Potato Variety Trial - EXTERNAL DEFECTS - GROWTH CRACKS, SECOND GROWTH, SHATTER BRUISE, SCAB - MEANS OF LOCATIONS

No. Clone	Growth Cracks <sup>1</sup>		Second Growth <sup>1</sup>		Shatter Bruise <sup>1</sup>			Scab <sup>1</sup>	
	Early	Late	Early	Late	Early	Late	AB <sup>2</sup>	Early	Late
1 ATLANTIC	5.0	5.0	5.0	5.0	4.2	4.9	3.1	5.0	4.3
2 CHIPETA	4.9	4.4	5.0	4.6	5.0	5.0	3.1	4.8	4.6
3 IVORY CRISP	4.9	5.0	5.0	5.0	4.7	4.2	2.8	4.5	3.7
4 A91814-5	5.0	4.2	--	4.8	5.0	5.0	3.1	4.0	3.8
5 B0766-3T	4.9	4.8	5.0	5.0	5.0	4.6	3.0	5.0	3.8
6 CO95051-7W	5.0	5.0	5.0	5.0	5.0	4.8	2.9	5.0	4.7
7 CO96141-4W	5.0	4.9	5.0	4.9	5.0	5.0	3.2	5.0	4.5
8 COA96141-2C	5.0	5.0	5.0	5.0	5.0	5.0	3.0	4.9	4.5
9 COA96142-3C	4.3	4.6	5.0	4.9	4.2	3.8	2.7	4.8	4.1
<b>MEANS</b>	<b>4.9</b>	<b>4.8</b>	<b>5.0</b>	<b>4.9</b>	<b>4.8</b>	<b>4.7</b>	<b>3.0</b>	<b>4.8</b>	<b>4.2</b>

<sup>1</sup> Score 1-5, with 1=severe, 5=none.

<sup>2</sup> Aberdeen shatter scores obtained from bruise evaluation conducted using a shatter chamber [1-5(none)].

TABLE 10: 2005 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 <sup>1</sup>			
		Early	Late			Early	Late		Early	Late	AB <sup>2</sup>	
1	ATLANTIC	39.8	4.0		0.0	2.8	0.0	2.9		5.0	4.4	3.4
2	CHIPETA	0.0	4.1	CV	0.0	1.5	0.0	3.7		5.0	4.3	2.8
3	IVORY CRISP	3.3	0.4		0.0	0.0	0.0	5.3	CV	5.0	4.1	2.8
4	A91814-5	--	0.0		0.0	0.3	0.0	11.0	CV	5.0	4.5	2.8
5	B0766-3T	6.7	3.3		0.0	0.0	0.5	5.3	CV	5.0	3.6	2.5
6	CO95051-7W	2.0	4.3	KF	0.0	0.0	0.0	11.3	CV	5.0	3.8	2.9
7	CO96141-4W	3.3	0.0		0.0	0.3	0.0	5.0	CV	5.0	4.4	3.2
8	COA96141-2C	3.3	1.3	CV	0.0	0.5	0.0	5.0	CV	5.0	4.9	3.4
9	COA96142-3C	33.3	4.7	ID	0.0	0.3	0.0	6.3	CV	5.0	4.6	3.0
<b>MEANS</b>		<b>11.5</b>	<b>2.5</b>		<b>0.0</b>	<b>0.6</b>	<b>0.1</b>	<b>6.2</b>		<b>5.0</b>	<b>4.3</b>	<b>3.0</b>
<b>LSD (.05)</b>			<b>NS</b>			<b>NS</b>						

<sup>1</sup> Score 1-5, with 1=severe, 5=none.

<sup>2</sup> Aberdeen blackspot scores from an abrasive peel test [1-5(none)].

TABLE 11: 2005 Western Regional Chipping Potato Variety Trial - CHIP COLOR

Clone	HRE <sup>1</sup> Field	CO <sup>1</sup>				ID <sup>1</sup>			CV <sup>2</sup>		KF <sup>2</sup> 50	HRL <sup>1</sup> 45	50 Means
		Chip 40		Chip 50		Chip 40		Chip 50	40	50			
		a	Recon <sup>b</sup>	c	Recon <sup>d</sup>	a	Recon <sup>b</sup>	c					
1 ATLANTIC	1.5	5.0	3.5	3.0	3.0	4.0	2.3	1.8	1.8	1.8	2.5	2.4	<b>2.3</b>
2 CHIPETA	2.0	5.0	4.0	3.0	2.5	3.6	1.9	1.3	2.0	1.6	2.0	1.6	<b>1.9</b>
3 IVORY CRISP	2.0	3.0	2.5	1.5	1.5	3.2	1.2	1.0	1.3	0.9	1.0	1.4	<b>1.2</b>
4 A91814-5	1.5	5.0	3.5	3.5	3.5	2.6	1.6	1.3	1.7	1.5	2.0	2.6	<b>2.2</b>
5 B0766-3T	2.0	3.5	3.0	3.0	1.5	3.1	2.3	1.6	1.4	1.3	2.5	2.5	<b>2.2</b>
6 CO95051-7W	1.5	3.0	3.0	2.5	1.5	2.8	1.8	1.5	1.6	1.4	1.5	1.6	<b>1.7</b>
7 CO96141-4W	1.0	4.0	3.5	2.5	1.5	3.8	2.9	1.4	1.3	1.5	1.5	1.9	<b>1.8</b>
8 COA96141-2C	1.0	2.5	2.5	2.0	2.0	1.8	1.4	1.0	1.4	1.5	1.0	1.6	<b>1.4</b>
9 COA96142-3C	1.3	5.0	4.5	2.5	3.0	3.6	2.6	1.1	2.1	1.3	1.5	2.1	<b>1.7</b>
<b>Location Means</b>	<b>1.5</b>	<b>4.0</b>	<b>3.3</b>	<b>2.6</b>	<b>2.2</b>	<b>3.2</b>	<b>2.0</b>	<b>1.3</b>	<b>1.6</b>	<b>1.4</b>	<b>1.7</b>	<b>2.0</b>	

<sup>1</sup> Color using Snack Food Association Frycolor Standards (1-5(darkest)).

<sup>2</sup> Agron readings converted to Snack Food Association Frycolor Standards (1-5(darkest)).

<sup>a</sup> Stored 6-8 weeks at 40°F.

<sup>b</sup> Stored 6-8 weeks at 40°F plus 3 weeks at 60°F.

<sup>c</sup> Stored 6-8 weeks at 50°F.

<sup>d</sup> Stored 6-8 weeks at 50°F plus 3 weeks at 60°F.

TABLE 12: 2005 Western Regional Chipping Potato Variety Trial - DISEASE EVALUATIONS, METRIBUZIN REACTION

No. Clone	Vert. Wilt/ Early Dying		Early Blight	Late Blight		Corky	Root- knot	Common Scab	Net Necrosis		Erwinia Soft Rot	Metr. Reaction
	AB	HERM	AB	Foliar	Tuber	Ringspot		AB	AB	HERM	AB	AB <sup>4</sup>
	0-9 <sup>1</sup>	0-9 <sup>1</sup>	0-9 <sup>1</sup>	0-9 <sup>1</sup>	(%)		PROSSER <sup>5</sup>	(%) <sup>3</sup>	(%) <sup>3</sup>	(%) <sup>3</sup>	0-5 <sup>2</sup>	
1 ATLANTIC	6.2	6.2	3.8	8.8	12.8	27.3	S	26.3	0.0	5.0	2.7	S
2 CHIPETA	6.8	4.5	2.3	7.5	50.0	7.5	S	0.0	6.7	2.5	3.7	--
3 IVORY CRISP	5.3	5.0	5.2	9.0	59.0	42.5	S	61.3	--	0.0	4.9	--
4 A91814-5	2.3	4.2	3.0	7.8	54.2	15.8	S	30.0	1.3	2.5	--	MS
5 B0766-3T	3.0	2.0	2.7	7.8	30.5	--	--	67.3	0.0	2.5	3.5	R
6 CO95051-7W	2.2	3.8	2.2	8.3	7.8	32.5	S	5.3	--	0.0	1.3	R
7 CO96141-4W	6.7	5.7	5.5	9.0	53.9	2.6	S	23.3	--	0.0	4.3	R
8 COA96141-2C	2.5	4.2	2.3	8.3	32.5	12.5	S	42.0	--	--	2.9	MR
9 COA96142-3C	3.8	4.7	4.2	8.8	39.5	27.5	S	26.7	--	0.0	4.1	VR
<b>MEANS</b>	<b>4.3</b>	<b>4.5</b>	<b>3.5</b>	<b>8.4</b>	<b>37.8</b>	<b>21.0</b>		<b>31.4</b>	<b>2.0</b>	<b>1.6</b>	<b>3.4</b>	
<b>LSD @ .05</b>	<b>1.5</b>	<b>1.9</b>	<b>2.7</b>					<b>18.6</b>	<b>10.9</b>	<b>NS</b>	<b>2.4</b>	

<sup>1</sup> 0 to 9, Where 0 or 1=No symptoms to a 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

<sup>2</sup> 0 to 5, Where 0=None; 1=mild symptoms, sample would not be out of grade to disease defect; 2= moderate symptoms, culls due to disease; 3= moderately severe symptoms, sample would be out of grade due to disease defect; 4=severe symptoms, sample out of grade; 5= maximum severity, all tubers in sample showing severe symptoms.

<sup>3</sup> Net necrosis % represents the number of tubers with a ≥3 rating (0-5 scale) divided by the total number of tubers examined. Net Necrosis AB is from 2003.

<sup>4</sup> Metribuzin Reaction measured at Aberdeen, ID

VR=very resistant, R=Resistant, MR=Moderately resistant, MS=moderately susceptible, S=susceptible VS=very susceptible.

<sup>5</sup> Evaluations made at Prosser, Washington by Chuck Brown:

TABLE 13: 2005 Western Regional Chipping Potato Variety Trial - SOLIDS, DEXTROSE, SUCROSE, PROTEIN, VITAMIN C, AND GLYCOALKALOIDS - ABERDEEN

Clone	Solids Oven Dry (%)	Sugars		Protein (%DWB)	Vitamin C (mg/100g FWB)	Glycoalkaloids (mg/100gFWB)
		Dextrose (%FWB)	Sucrose (%FWB)			
1 ATLANTIC	22.4	0.01	0.14	6.3	21.4	5.0
2 CHIPETA	22.7	0.02	0.24	6.8	27.0	5.5
3 IVORY CRISP	21.4	0.01	0.12	7.3	22.7	4.0
4 A91814-5	23.3	0.01	0.17	5.7	21.6	6.1
5 B0766-3T	22.7	0.01	0.24	6.0	20.7	3.9
6 CO95051-7W	23.5	0.01	0.16	8.0	23.7	5.2
7 CO96141-4W	21.2	0.01	0.10	6.5	23.5	2.7
8 COA96141-2C	20.1	0.01	0.10	7.6	24.5	2.8
9 COA96142-3C	22.7	0.01	0.15	6.9	25.2	2.5
<b>Means</b>	<b>22.2</b>	<b>0.01</b>	<b>0.16</b>	<b>6.8</b>	<b>23.4</b>	<b>4.2</b>

FWB = fresh weight basis DWB = dry weight basis

Glycoalkaloids: The 2005 Lenape check from Aberdeen was 22.8 mg/100g

TABLE 14: 2005 Western Regional Chipping Potato Variety Trial - MERIT SCORES (1-5(best))

No.	Clone	Fresh Merit			Processing Merit						
		CO	ID	Means	HRE	CO	ID	CV	KF	HRL	Means
1	ATLANTIC	2.0	3.3	<b>2.7</b>	2.0	3.0	3.0	3.0	3.3	3.5	<b>3.2</b>
2	CHIPETA	5.0	2.5	<b>3.8</b>	4.0	4.0	3.4	3.0	3.5	3.0	<b>3.4</b>
3	IVORY CRISP	1.0	2.3	<b>1.7</b>	3.5	3.0	3.2	5.0	4.3	4.5	<b>4.0</b>
4	A91814-5	3.0	2.3	<b>2.7</b>	3.0	1.0	3.6	4.5	4.0	2.0	<b>3.0</b>
5	B0766-3T	3.0	3.5	<b>3.3</b>	3.0	3.0	3.4	5.0	3.8	3.0	<b>3.6</b>
6	CO95051-7W	3.0	4.0	<b>3.5</b>	3.0	3.0	3.4	5.0	3.0	4.5	<b>3.8</b>
7	CO96141-4W	2.0	3.3	<b>2.7</b>	4.0	3.0	2.5	4.5	3.3	2.5	<b>3.2</b>
8	COA96141-2C	3.0	3.8	<b>3.4</b>	2.5	3.0	4.0	4.5	2.8	3.5	<b>3.6</b>
9	COA96142-3C	2.0	3.0	<b>2.5</b>	2.0	1.0	3.2	5.0	4.0	3.0	<b>3.2</b>
<b>Location Means</b>		<b>2.7</b>	<b>3.1</b>	<b>2.9</b>	<b>3.0</b>	<b>2.7</b>	<b>3.3</b>	<b>4.4</b>	<b>3.6</b>	<b>3.3</b>	<b>3.4</b>





Springlake Antioxidant Activity of Clones/Varieties as Determined by DPPH Assay<sup>1</sup> for 8 entries in the Western Regional Chipping Table 5f. Trial grown near Dalhart, Texas-2005.

Clone/Variety	µg Trolox equivalents/gfw <sup>2</sup>	µg ascorbic acid equivalents/gfw <sup>3</sup>
Atlantic	107.3	104.9
Chipeta	238.1	232.6
Ivory Crisp	29.8	29.1
A91814-5	45.6	44.5
B0766-3T	na	na
CO95051-7W	54.5	53.2
CO96141-4W	200.6	196.0
COA96141-2C	164.6	160.8
COA96142-3C	170.4	166.5
Average	126.4	123.5

<sup>1</sup> The 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, Levensm. 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.

<sup>2</sup> µg Trolox equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation:  $y=891.69x$ .

<sup>3</sup> µg Ascorbic acid equivalents/gfw - Absorbance was converted to ascorbic acid equivalents based on a standard curve using the following equation:  $y=871.24x$ .

**Plant and tuber characteristics of advanced chipping potato selections  
grown at Klamath Falls, OR, 2005.**

Additional Data to Report<sup>1</sup>

Entry	Clone	Hermiston Late Trial	length/idth/dep tubers/ width ratio plant			Clone	Tuber characteristics <sup>1</sup>							
			Eye	Shape	Uniformity		GC	SB	% HH	% BC	% Hardbite			
1	Atlantic	soft rot	1.03	1.24	10.6	Atlantic	4.0	1.8	3.3	4.8	4.9	5	0	0
2	Chipeta	very large. Green	1.17	1.18	9.9	Chipeta	3.0	1.9	3.1	3.9	5.0	3	0	0
3	Ivory Crisp		0.93	1.27	15.1	Ivory Crisp	3.9	1.1	3.9	4.8	4.8	0	0	0
4	A91814-5	flat, discard	1.14	1.39	20.9	A91814-5	3.8	2.0	3.8	4.5	5.0	0	0	3
5*	B0766-3T	little soft rot	1.15	1.21	10	B0766-3T	4.1	1.6	3.4	4.4	4.8	0	3	3
6	CO95051-7W	nice, ok, flatish	1.1	1.33	12.1	CO95051-7W	4.1	1.0	4.3	5.0	5.0	0	25	6
7	CO96141-4W	oblong, ok	1.2	1.29	9.9	CO96141-4W	4.9	1.4	4.0	4.6	5.0	0	0	0
8	COA96141-2C	nice, few attached stems	1.06	1.18	12.1	COA96141-2C	4.3	1.3	4.3	5.0	5.0	0	0	0
9	COA96142-3C	nice shape, soft rot	0.98	1.28	10.8	COA96142-3C	4.0	1.3	3.8	4.5	4.5	5	0	0
<b>Hermiston Early Trial</b>														
1	Atlantic		1.07	1.24		Mean						1	3	1
2	Chipeta	attached stems, good size, uniform	1.18	1.22										
3	Ivory Crisp		0.94	1.23										
4	A91814-5	too flat, soft rot	1.18	1.33										
5*	B0766-3T	nice, attached stems	1.1	1.19										
6	CO95051-7W	all small, ok	1.11	1.24										
7	CO96141-4W	nice, oblong, ok	1.22	1.24										
8	COA96141-2C		1.07	1.15										
9	COA96142-3C		1	1.24										
<b>Idaho Comments</b>														
1	Atlantic													
2	Chipeta													
3	Ivory Crisp													
4	A91814-5	pointy oval												
5*	B0766-3T	scaly buff, almost round												
6	CO95051-7W	small flat round, scaly buff												
7	CO96141-4W	white oval flat												
8	COA96141-2C	buff oval-round, many tubers, deep eyes												
9	COA96142-3C	small, round, deep bud ends, scab, scaly big, green												

Eye Depth: 1 is deep, to 5 for shallow  
Shape: 1 is round, 2 for oval, 3 for oblong.  
Uniformity: Size and shape; 1 is poor, to 5 for excellent  
Growth Cracks: 1 is severe, to 5 for none  
Shatter Bruise: 1 is severe, to 5 for none  
% HH: % Hollow Heart  
% Hardbite: creamy/tan hardened tuber tissue just under periderm

2004 Western Regional Chipper Trial - Tulelake

	Date	Shatter Bruise (%)	Cumulative Rot (%)				Cumulative Shrink (%)				Turgor Rating (1-5)				Sprout Rating (1-5)				Relative Storage Merit Score (1-5)			
		29 DAH	29 DAH	92 DAH	123 DAH	156 DAH	29 DAH	92 DAH	123 DAH	156 DAH	29 DAH	123 DAH	93 DAH	156 DAH	29 DAH	92 DAH	123 DAH	156 DAH	29 DAH	92 DAH	123 DAH	156 DAH
21	Atlantic	3.0	0.4	0.4	0.4	0.4	3.1	5.5	7.5	10.6	5.0	4.0	3.5	2.5	5.0	3.0	3.0	2.0	5.0	4.0	3.0	2.5
22	Chipeta	3.5	0.0	0.0	0.0	0.0	2.5	4.4	5.5	4.8	5.0	5.0	4.0	4.0	5.0	4.0	4.0	2.0	5.0	5.0	5.0	3.5
23	A91814-5	4.0	2.1	2.4	2.4	2.4	3.6	6.1	7.4	9.5	5.0	4.0	3.5	3.0	5.0	4.0	3.5	2.0	5.0	4.5	4.0	3.0
24	BO766-3	3.5	0.4	0.4	0.4	0.4	2.1	4.2	6.2	7.9	5.0	4.0	3.5	3.0	5.0	3.0	3.0	2.0	5.0	4.0	3.5	3.0
25	Ivory Crisp	3.0	4.2	4.2	4.2	4.2	3.0	6.2	8.5	11.6	5.0	4.0	4.0	3.0	5.0	3.0	3.0	2.0	5.0	4.0	3.5	3.0
26	COA96141-1C	3.0	0.0	0.0	0.0	0.0	2.6	4.6	6.1	8.6	5.0	4.0	4.0	3.5	5.0	4.0	4.0	2.0	5.0	4.0	4.0	3.5
27	COA96142-3C	2.0	0.0	0.0	0.0	0.0	2.4	4.6	5.9	7.7	5.0	5.0	4.0	3.5	5.0	4.0	4.0	2.0	5.0	5.0	4.0	3.5
28	B1240-1	3.0	0.0	0.6	0.6	1.2	2.9	5.4	7.7	8.7	5.0	4.5	3.5	4.0	5.0	4.0	3.0	2.0	5.0	4.5	3.5	4.0
29	CO95051-7W	2.0	0.0	0.0	0.0	0.0	4.0	7.2	8.9	9.9	5.0	4.0	3.5	3.0	5.0	3.5	4.0	2.0	5.0	4.5	4.5	3.0

1325 Chipper Storage Data

12/08/05

Variety	% shrink	Turgor	atter Bru	Skinning
Atlantic	4.3172	5	4	4.5
Chipeta	2.503	5	4	4.5
Ivory Crisp	3.6729	5	4	3.5
A91814-5	3.1225	5	4.5	3
B0766-3T	3.0339	5	5	4
CO95051-7W	4.5716	5	4.5	4.5
CO96141-4W	3.2295	5	5	5
COA96141-2C	2.7242	5	5	4
COA96142-3C	5.8331	5	4	4.5

## 1325 2005 Baley Trotman Chipper Cook Test

Sample Date: 11/7/2005

Bin #	Variety Name	Variety #	Tuber Temp		Solids	Specific Gravity	Green Grams	Und		Internal grams	External grams	%TDF	Sample Wt			SFA rating (1-3)	chip rating (1-5)	Cooking Comments	Chip Appearance Comments
			High	Low				Color grams	grams				grams	sucrose	dextrose				
464	Atlantic	24	55.1	55	19.63	1.096			0	1	16	10	170	0.517	0.212	3	4	N/A	Chips slightly dark
456	Chipeta	28	52.8		15.89	1.075			58	0	0	36.4	159	0.486	0.632	3	5	N/A	Dark chips
455	Ivory Crisp	50	54.6	54	19.27	1.094			0	17	0	9.6	177	0.528	0.106	2	2	N/A	Chips good color
462	A91814-5	1	52	52	18.21	1.088			23	20	9	29.7	175	0.359	0.795	3	5	N/A	Chips slightly dark, mostly flat
458	B0766-3T	26	53.4		18.21	1.088			133	0	0	69.3	163	0.603	1.49	3	5	N/A	Very dark chip middles, look bad
457	CO95051-7W	33	53		19.45	1.095			0	9	5	8.6	161	0.55	0.031	2	3	N/A	Chips good color
460	CO96141-4W	36	52.5	52	16.96	1.081			2	0	5	4.6	150	0.418	0.048	3	4	N/A	Chips slightly dark
463	COA96141-2C	45	54.7		16.07	1.076			4	0	2	3.1	195	0.261	0.131	2	3	N/A	Uniform, chips good color
454	COA96142-3C	46	55.1	54	17.14	1.082			5	7	0	7.6	158	0.411	0.095	2	3	N/A	Chips good color, small in size

## 1325 2005 Baley Trotman Chipper Cook Test

Sample Date: 12/8/2005

Bin #	Variety Name	Variety #	Tuber Temp		Solids	Specific Gravity	Green Grams	Und		Internal grams	External grams	%TDF	Sample Wt			SFA rating (1-3)	chip rating (1-5)	Cooking Comments	Chip Appearance Comments	
			High	Low				Color grams	grams				grams	sucrose	dextrose					
464	Atlantic	24	54.5	54	19.99	1.098			4	13	0	4	8.5	247	0.764	0.122	3	4		
456	Chipeta	28	53.9	54	15.18	1.071			2	11	16	0	19.6	148	0.895	0.245	3	4		
455	Ivory Crisp	50	54.5	54	18.21	1.088			2	0	8	0	4.8	207	0.986	0.255	2	2		
462	A91814-5	1	53.9	54	19.27	1.094			0	7	108	4	47.4	251	1.177	0.417	3	5		
458	B0766-3T	26	54.5	54	17.49	1.084			0	58	46	0	6.9	151	2.297	0.951	3	5		
457	CO95051-7W	33	54.1	53	19.45	1.095			0	0	0	0	0	216	0.5	0.032	2	2		
460	CO96141-4W	36	54.1	54	17.31	1.083			0	0	5	0	2.1	242	0.44	0.043	2	2		
463	COA96141-2C	45	53.9	54	16.07	1.076			2	12	9	0	1.1	210	0.313	0.078	2	2		
454	COA96142-3C	46	53.9	54	16.07	1.076			0	0	7	0	4.8	146	0.794	0.17	2	2		