

2022 WESTERN REGIONAL CHIPPING POTATO TRIAL REPORT

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2022 WESTERN REGIONAL CHIPPING POTATO VARIETY TRIAL REPORT

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Data provided by cooperators in California, Colorado, Idaho, Oregon, and Texas

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TABLE 1: 2022 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 K. Nicholson | Late | Sprink. | 150-50-200 | 10" x 36" | 18-May | 7-Sep Reglone | 3-Oct | 112 | 138 | Prowl H2O Outlook Matrix | Admire-Pro Vydate | Vellum Prime Quadris Manzate Max Tranquility Maxim 4FS (seed) |
| San Luis Valley Colorado (CO) | J. Chitwood-Brown D. Holm C. Gray B. Niebaum | Late | Pivot | 160-60-40 | 12" x 34" | 12-May | 9-Sep Mechanical | 22-Sep | 120 | 133 | Prowl H2O Tuscany Clethodim 2E | Platinum 75 SG Leverage 360 Movento HL Sefina Inscalis | Quadris Top Elatus Revus Top Luna Tranquility Agri Tin |
| Aberdeen Idaho (ID) | R. Spear R. Novy J. Whitworth C. Lowder | Late | Sprink. | 270-115-5Zn-5Mn | 10" x 36" | 22-Apr | 1-Sep Mechanical | 19-Sep | 132 | 150 | TriCor 4F Matrix Eptam 7-E | Admire Pro | |
| Hermiston Oregon (HRM) | V. Sathuvalli | Early | Pivot | 125N-40P-150K-30S-10Mg-12n-3B | 9.25" x 34" | 23-Mar | 27-Jul Reglone | 9-Aug | 126 | 139 | Dual-Magnum Prowl | Admire Coragen Blackhawk | Quadris Ridimil Omega |
| Dalhart Texas (DTX) | I. Vales J. Koym D. Scheuring | Early | Pivot | 266-0-0 | 10.2" x 28" | 6-May | 8-Aug Reglone | 19-Sep | 94 | 136 | Matrix SG Herbicide Glory 4 TriCor 4F Eptam 7E PARAZONE 3SL LI 700 Reglone | Reaper ClearForm Fulfill Movento Beleaf 50 SG | Minuet MetaStar 4S Aframe Echo 720 Manzate Max Scala Brand SC Penncozeb 75 DF |
| Springlake Texas (STX) | I. Vales J. Koym D. Scheuring J. Pandey S. Toinga-Villafuerte | Early | Pivot | 100-40-35 | 9" x 36" | 25-Mar | 11-Jul Mechanical | 21-Jul | 108 | 118 | Makaze Matrix Medal EC Metribuzin 75 CA Pin-Dee 3.3 EC | Minecto Pro Movento Oberon 4 SC Selina Inscalis Sivanto 200 SL | Headline Miravis Prime NUCOP HB Scala SC Tanos |

*There was no trial grown at Klamath Falls due to zero water delivery to the research station

TABLE 2: 2022 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 | % Stand Mean | Mean | Tuber Shape | Tuber Mean | Skin | Vine Mean | Size | Vine Mean | Maturity | Stems/Plant Mean |
|-----|-------------|-------------------------|--------------|------------|---------------|-------------|--------------|------|-------------|------------|-------|-----------|-----------|-----------|----------|------------------|
| 1 | Atlantic | Wauseon x B5141-6 | Red-purple | Check | Ck | OR | 99 | 1.5 | Round | 2.6 | Buff | 3.1 | Med-large | 3.2 | Medium | 2.2 |
| 2 | Lamoka | NY120 x NY115 | Purple | Check | Ck | OR | 97 | 2.0 | Round | 1.1 | White | 3.0 | Medium | 3.5 | Medium | 2.2 |
| 3 | Snowden | Lenape x Wischip | White | Check | Ck | OR | 99 | 1.2 | Round | 2.7 | Buff | 3.3 | Med-large | 3.6 | Med-late | 2.3 |
| 4 | A13125-3C | MSR061-1 x CO02321-4W | | CO | 1 | ID | 98 | 1.3 | Round | 1.3 | White | 2.4 | Small | 3.7 | Med-late | 1.8 |
| 5 | AOR12197-4 | V-15-71 x CO02121-4W | White | OR | 3 | OR | 100 | 1.2 | Round | 1.3 | White | 3.2 | Med-large | 3.9 | Med-late | 2.3 |
| 6 | CO11037-5W | BC0894-2W x W2133-1 | Light Purple | CO | 3 | CO | 99 | 2.0 | Round | 1.4 | White | 3.0 | Medium | 3.4 | Medium | 2.5 |
| 7 | CO12235-3W | AC00206-2W x AC03433-1W | White | CO | 2 | CO | 98 | 1.1 | Round | 1.2 | White | 2.7 | Medium | 3.1 | Medium | 2.3 |
| 8 | CO12293-1W | CO02024-9W x ND7519-1 | White | CO | 2 | CO | 98 | 1.5 | Round | 1.1 | White | 3.2 | Med-large | 3.7 | Med-late | 3.4 |
| 9 | CO13232-25W | AC00206-2W x CO02024-9W | White | CO | 1 | CO | 98 | 1.1 | Round | 1.7 | White | 2.8 | Medium | 3.4 | Medium | 3.1 |
| 10 | COOR13270-2 | Winterset x CO02024-9W | White | CO | 2 | OR | 100 | 1.7 | Round | 1.2 | White | 2.9 | Medium | 3.5 | Medium | 2.2 |
| 11 | NYOR14Q9-5 | Eva x H25-4 | White | OR | 2 | OR | 92 | 1.6 | Round | 1.2 | White | 3.1 | Med-large | 3.6 | Med-late | 1.8 |
| 12 | NYOR14Q9-9 | Eva x H25-4 | White | OR | 1 | OR | 100 | 1.7 | Round | 1.2 | White | 3.0 | Medium | 3.6 | Med-late | 2.7 |

1 Numerical values are means of all trial locations.

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: 2022 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 | DTX | STX | | | CA | CO | ID | HRM | DTX | STX | | |
| 1 ATLANTIC | | 420 | 282 | 646 | 604 | 407 | 472 | 2 | | 312 | 209 | 451 | 448 | 184 | 321 | 5 |
| | | | | | | | | | | 74 | 74 | 70 | 74 | 45 | 68 | 5 |
| 2 Lamoka | 487 | 489 | 345 | 599 | 439 | 353 | 452 | 6 | 487 | 374 | 254 | 435 | 364 | 204 | 353 | 1 |
| | | | | | | | | | 83 | 76 | 74 | 73 | 83 | 58 | 74 | 3 |
| 3 SNOWDEN | | 509 | 322 | 598 | 522 | 379 | 466 | 3 | | 365 | 88 | 408 | 388 | 119 | 274 | 9 |
| | | | | | | | | | | 72 | 27 | 68 | 74 | 31 | 55 | 11 |
| 4 A13125-3C* | | | 369 | 684 | | | 526 | | | | 306 | 414 | | | 360 | |
| | | | | | | | | | | 83 | 61 | | | | 72 | |
| 5 AOR12197-4 | | 596 | 333 | 598 | 422 | 310 | 452 | 7 | | 449 | 237 | 403 | 318 | 83 | 298 | 7 |
| | | | | | | | | | | 75 | 71 | 67 | 75 | 27 | 63 | 7 |
| 6 CO11037-5W | 490 | 532 | 349 | 578 | 348 | 295 | 432 | 9 | 441 | 407 | 255 | 404 | 283 | 80 | 312 | 6 |
| | | | | | | | | | 90 | 76 | 73 | 70 | 81 | 27 | 70 | 4 |
| 7 CO12235-3W | 368 | 387 | 263 | 573 | 401 | 260 | 375 | 11 | 297 | 278 | 139 | 328 | 308 | 75 | 238 | 11 |
| | | | | | | | | | 81 | 72 | 53 | 57 | 77 | 29 | 61 | 9 |
| 8 CO12293-1W | 497 | 586 | 329 | 611 | 426 | 275 | 454 | 5 | 433 | 472 | 263 | 440 | 366 | 127 | 350 | 2 |
| | | | | | | | | | 87 | 81 | 80 | 72 | 86 | 46 | 75 | 1 |
| 9 CO13232-25W | 499 | 497 | 349 | 585 | 478 | 285 | 449 | 8 | 413 | 382 | 211 | 353 | 341 | 19 | 286 | 8 |
| | | | | | | | | | 83 | 77 | 60 | 60 | 71 | 7 | 60 | 10 |
| 10 COOR13270-2 | | 434 | 252 | 612 | 502 | 289 | 418 | 10 | | 294 | 179 | 431 | 356 | 82 | 268 | 10 |
| | | | | | | | | | | 68 | 71 | 70 | 71 | 28 | 62 | 8 |
| 11 NYOR14Q9-5 | | 479 | 336 | 633 | 557 | 305 | 462 | 4 | | 389 | 281 | 362 | 499 | 189 | 344 | 3 |
| | | | | | | | | | | 81 | 84 | 57 | 90 | 62 | 75 | 2 |
| 12 NYOR14Q9-9 | | 564 | 333 | 583 | 507 | 416 | 480 | 1 | | 430 | 204 | 405 | 435 | 179 | 331 | 4 |
| | | | | | | | | | | 76 | 61 | 70 | 86 | 43 | 67 | 6 |
| Location Mean | 495 | 508 | 324 | 610 | 483 | 316 | 479 | | 427 | 377 | 211 | 409 | 367 | 106 | 306 | |
| | | | | | | | | | 86 | 74 | 65 | 67 | 76 | 30 | 64 | |

*Entry 4 was only grown in Idaho and Oregon and therefore is not included in the rankings

TABLE 4: 2022 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 | DTX | STX | Entry Mean | Rank | CA | CO | ID | HRM | DTX | STX | Entry Mean | Rank |
| 1 ATLANTIC | | 115 | 25 | 59 | 73 | 12 | 57 | 6 | | 65 | 54 | 121 | 156 | 221 | 124 | 6 |
| | | 27 | 9 | 9 | 12 | 3 | 12 | 6 | | 15 | 19 | 19 | 26 | 54 | 27 | 7 |
| 2 Lamoka | 55 | 181 | 25 | 54 | 98 | 7 | 70 | 5 | 62 | 61 | 70 | 91 | 75 | 137 | 83 | 8 |
| | 11 | 37 | 7 | 9 | 22 | 2 | 15 | 5 | 13 | 12 | 20 | 15 | 17 | 39 | 19 | 9 |
| 3 SNOWDEN | | 85 | 0 | 14 | 70 | 0 | 34 | 8 | | 128 | 230 | 163 | 134 | 258 | 183 | 1 |
| | | 17 | 0 | 2 | 13 | 0 | 6 | 10 | | 25 | 71 | 27 | 26 | 68 | 43 | 1 |
| 4 A13125-3C* | | | 50 | 203 | | | 126 | | | | 46 | 53 | | | 49 | |
| | | | 13 | 30 | | | 22 | | | | 12 | 8 | | | 10 | |
| 5 AOR12197-4 | | 178 | 47 | 93 | 64 | 0 | 76 | 3 | | 83 | 54 | 81 | 104 | 224 | 109 | 7 |
| | | 30 | 14 | 16 | 15 | 0 | 15 | 4 | | 14 | 16 | 14 | 25 | 72 | 28 | 6 |
| 6 CO11037-5W | 137 | 123 | 21 | 75 | 68 | 0 | 71 | 4 | 44 | 80 | 84 | 83 | 45 | 121 | 76 | 10 |
| | 28 | 23 | 6 | 13 | 20 | 0 | 15 | 3 | 9 | 15 | 24 | 14 | 13 | 41 | 19 | 10 |
| 7 CO12235-3W | 74 | 48 | 9 | 3 | 61 | 0 | 33 | 9 | 62 | 98 | 115 | 233 | 90 | 169 | 128 | 5 |
| | 20 | 12 | 4 | 1 | 15 | 0 | 9 | 8 | 17 | 25 | 44 | 41 | 22 | 65 | 36 | 3 |
| 8 CO12293-1W | 178 | 196 | 55 | 21 | 84 | 12 | 91 | 2 | 47 | 57 | 49 | 133 | 57 | 147 | 82 | 9 |
| | 36 | 33 | 17 | 3 | 20 | 5 | 19 | 2 | 9 | 10 | 15 | 22 | 13 | 53 | 20 | 8 |
| 9 CO13232-25W | 47 | 69 | 14 | 12 | 27 | 0 | 28 | 11 | 75 | 95 | 130 | 218 | 137 | 266 | 154 | 2 |
| | 9 | 14 | 4 | 2 | 6 | 0 | 6 | 11 | 15 | 19 | 37 | 37 | 29 | 93 | 38 | 2 |
| 10 COOR13270-2 | | 59 | 16 | 31 | 33 | 4 | 29 | 10 | | 99 | 60 | 144 | 145 | 207 | 131 | 4 |
| | | 14 | 6 | 5 | 7 | 2 | 7 | 9 | | 23 | 24 | 24 | 29 | 72 | 34 | 4 |
| 11 NYOR14Q9-5 | | 173 | 108 | 219 | 162 | 5 | 133 | 1 | | 42 | 26 | 44 | 58 | 111 | 56 | 11 |
| | | 36 | 32 | 35 | 29 | 2 | 27 | 1 | | 9 | 8 | 7 | 10 | 37 | 14 | 11 |
| 12 NYOR14Q9-9 | | 98 | 17 | 36 | 84 | 0 | 47 | 7 | | 115 | 127 | 132 | 71 | 233 | 135 | 3 |
| | | 17 | 5 | 6 | 17 | 0 | 9 | 7 | | 20 | 38 | 23 | 14 | 56 | 30 | 5 |
| Location Mean | 98 | 121 | 32 | 68 | 75 | 4 | 66 | | 58 | 84 | 87 | 125 | 98 | 190 | 109 | |
| | 21 | 24 | 10 | 11 | 16 | 1 | 13 | | 13 | 17 | 27 | 21 | 20 | 59 | 27 | |

*Entry 4 was only grown in Idaho and Oregon and therefore is not included in the rankings

TABLE 5: 2022 Western Regional Chipping Potato Variety Trial - SPECIFIC GRAVITY

| No. Clone | Specific Gravity | | | | | | Entry Mean | Rank |
|----------------------|------------------|--------------|--------------|------------------|--------------|--------------|--------------|------|
| | CA | CO | ID | HRM ¹ | DTX | STX | | |
| 1 Atlantic | | 1.093 | 1.096 | 1.084 | 1.081 | 1.079 | 1.087 | 2 |
| 2 Lamoka | 1.085 | 1.098 | 1.094 | 1.088 | 1.088 | 1.077 | 1.088 | 1 |
| 3 Snowden | | 1.100 | 1.091 | 1.082 | 1.073 | 1.072 | 1.083 | 4 |
| 4 A13125-3C | | | 1.091 | 1.082 | | | 1.086 | 3 |
| 5 AOR12197-4 | | 1.094 | 1.089 | 1.076 | 1.072 | 1.071 | 1.080 | 9 |
| 6 CO11037-5W | 1.086 | 1.092 | 1.093 | 1.076 | 1.061 | 1.066 | 1.079 | 11 |
| 7 CO12235-3W | 1.084 | 1.087 | 1.091 | 1.076 | 1.080 | 1.077 | 1.082 | 6 |
| 8 CO12293-1W | 1.085 | 1.096 | 1.089 | 1.078 | 1.067 | 1.070 | 1.081 | 8 |
| 9 CO13232-25W | 1.086 | 1.084 | 1.083 | 1.073 | 1.071 | 1.068 | 1.077 | 12 |
| 10 COOR13270-2 | | 1.089 | 1.095 | 1.078 | 1.074 | 1.072 | 1.082 | 7 |
| 11 NYOR14Q9-5 | | 1.091 | 1.088 | 1.077 | 1.071 | 1.072 | 1.080 | 10 |
| 12 NYOR14Q9-9 | | 1.095 | 1.095 | 1.077 | 1.071 | 1.077 | 1.083 | 5 |
| Location Mean | 1.085 | 1.093 | 1.091 | 1.079 | 1.074 | 1.073 | 1.082 | |

TABLE 6: 2022 Western Regional Chipping Potato Variety Trial - AVERAGE TUBER SIZE, AND TUBER SHAPE

| No. Clone | Average Tuber Size (oz) | | | | | | Tuber Shape ¹ | | | | | | | | | | Entry Mean | | | | | | | | | | |
|----------------------|-------------------------|------------|------------|------------|------------|------------|--------------------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|----------------------------|-------------|-------------|------------|------------|------------|------------|------------|------------|------------|
| | CA | ID | HRM | DTX | STX | Entry Mean | Length/Width | | | | | Width/ Thick | | | | | | (1-5, 1 = round, 5 = long) | | | | | Entry Mean | | | | |
| | | | | | | | CA | CO | ID | HRM | DTX | STX | Entry Mean | CA | CO | ID | | HRM | DTX | STX | Entry Mean | CA | | CO | ID | HRM | DTX |
| 1 Atlantic | | 5.1 | 4.6 | 4.3 | 3.3 | 4.3 | | 1.07 | 1.08 | 1.08 | 0.95 | 1.00 | 1.04 | | 1.22 | 1.28 | 1.25 | 1.19 | 1.25 | 1.24 | | 1.0 | 1.5 | 2.0 | 1.3 | 1.6 | 1.5 |
| 2 Lamoka | 6.0 | 4.9 | 5.0 | 4.9 | 3.7 | 4.9 | 1.07 | 1.17 | 1.11 | 1.08 | 1.16 | 1.19 | 1.13 | 1.25 | 1.23 | 1.36 | 1.32 | 1.15 | 1.22 | 1.26 | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 |
| 3 Snowden | | 2.9 | 4.1 | 4.3 | 2.7 | 3.5 | | 0.97 | 0.94 | 0.94 | 0.94 | 1.01 | 0.96 | | 1.24 | 1.17 | 1.26 | 1.28 | 1.24 | 1.24 | | 1.0 | 1.0 | 2.0 | 1.0 | 1.0 | 1.2 |
| 4 A13125-3C | | 5.8 | 6.3 | | | 6.0 | | | 1.05 | 0.99 | | | 1.02 | | | 1.27 | 1.16 | | | 1.21 | | | 1.5 | 1.0 | | | 1.3 |
| 5 AOR12197-4 | | 5.3 | 5.0 | 4.0 | 2.1 | 4.1 | | 0.98 | 0.94 | 0.97 | 0.88 | 1.02 | 0.96 | | 1.24 | 1.16 | 1.22 | 1.28 | 1.10 | 1.20 | | 1.0 | 1.4 | 1.5 | 1.0 | 1.0 | 1.2 |
| 6 CO11037-5W | 6.9 | 4.7 | 5.2 | 4.7 | 3.0 | 4.9 | 0.98 | 1.14 | 1.11 | 1.08 | 1.47 | 1.13 | 1.15 | 1.14 | 1.18 | 1.29 | 1.22 | 1.13 | 1.14 | 1.20 | 2.0 | 1.0 | 1.6 | 1.8 | 3.4 | 2.0 | 2.0 |
| 7 CO12235-3W | 5.8 | 3.9 | 3.3 | 4.2 | 2.7 | 4.0 | 0.87 | 1.12 | 1.04 | 1.02 | 0.92 | 0.91 | 0.98 | 1.15 | 1.13 | 1.22 | 1.20 | 1.16 | 1.12 | 1.17 | 1.5 | 1.0 | 1.1 | 1.5 | 1.0 | 1.0 | 1.2 |
| 8 CO12293-1W | 7.1 | 5.5 | 4.3 | 4.5 | 3.0 | 4.9 | 1.10 | 1.14 | 1.11 | 1.09 | 1.07 | 1.21 | 1.12 | 1.15 | 1.18 | 1.31 | 1.25 | 1.10 | 1.20 | 1.21 | 2.5 | 1.0 | 1.5 | 2.0 | 1.2 | 2.0 | 1.7 |
| 9 CO13232-25W | 5.7 | 4.1 | 3.5 | 3.3 | 1.9 | 3.7 | 1.00 | 1.00 | 1.04 | 0.96 | 0.98 | 1.03 | 1.00 | 1.24 | 1.16 | 1.24 | 1.21 | 1.16 | 1.18 | 1.19 | 2.0 | 1.0 | 1.4 | 1.3 | 1.0 | 1.0 | 1.3 |
| 10 COOR13270-2 | | 4.7 | 4.8 | 3.9 | 2.8 | 4.0 | | 1.18 | 1.15 | 1.08 | 1.12 | 1.09 | 1.12 | | 1.16 | 1.33 | 1.23 | 1.10 | 1.14 | 1.19 | | 2.0 | 1.5 | 2.0 | 1.2 | 2.0 | 1.7 |
| 11 NYOR14Q9-5 | | 6.9 | 6.8 | 5.1 | 4.3 | 5.8 | | 1.15 | 1.07 | 0.94 | 0.94 | 1.10 | 1.04 | | 1.19 | 1.34 | 1.33 | 1.29 | 1.23 | 1.28 | | 1.0 | 2.0 | 2.0 | 1.2 | 2.0 | 1.6 |
| 12 NYOR14Q9-9 | | 4.1 | 4.3 | 4.4 | 3.3 | 4.0 | | 1.10 | 1.04 | 1.04 | 1.04 | 1.12 | 1.07 | | 1.19 | 1.22 | 1.27 | 1.22 | 1.26 | 1.23 | | 1.0 | 1.5 | 1.8 | 2.0 | 2.0 | 1.7 |
| Location Mean | 6.3 | 4.8 | 4.8 | 4.3 | 3.0 | 4.5 | 1.00 | 1.09 | 1.06 | 1.02 | 1.04 | 1.07 | 1.05 | 1.19 | 1.19 | 1.27 | 1.24 | 1.19 | 1.19 | 1.22 | 2.1 | 1.2 | 1.5 | 1.7 | 1.5 | 1.6 | 1.5 |

¹L=length, W=width, T=thickness. For L:W <1.00=compressed; 1.00-1.15=round; 1.16-1.55=oval; 1.56-1.95=oblong; 1.96-2.35=long; >2.35=very long. For W:T, the larger the value, the flatter the tuber.

TABLE 7: 2022 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 | | | | | Scab ¹ | | | | |
|----------------------|----------------------------|-----------------|------------|------------|------------|------------|------------|------------|----------------------------|------------|------------|------------|------------|------------|------------|-----------------|-----------------------|------------|------------|------------|------------|------------|-----------------|------------|----------------|------------|------------|------------|------------|-------------------|------------|------------|--|--|
| | ID ² | CA ³ | CO | ID | HRM | DTX | STX | Entry Mean | CA ² | CO | ID | HRM | DTX | STX | Entry Mean | ID ² | CA ² | CO | HRM | DTX | STX | Entry Mean | ID ³ | HRM | DTX | STX | Entry Mean | ID | HRM | DTX | STX | Entry Mean | | |
| 1 Atlantic | 0.0 | | 3.0 | 5.0 | 4.5 | 5.0 | 5.0 | 4.5 | | 4.0 | 5.0 | 4.1 | 5.0 | 5.0 | 4.6 | 6.5 | | 2.0 | 4.5 | 5.0 | 5.0 | 4.1 | 3.4 | 4.4 | 5.0 | 5.0 | 4.8 | 4.3 | 4.5 | 5.0 | 5.0 | 4.7 | | |
| 2 Lamoka | 0.4 | 0.0 | 5.0 | 4.9 | 4.9 | 5.0 | 5.0 | 5.0 | 0.0 | 5.0 | 5.0 | 4.3 | 5.0 | 5.0 | 4.9 | 18.3 | 2.8 | 1.0 | 4.3 | 5.0 | 5.0 | 3.8 | 4.0 | 4.9 | 5.0 | 5.0 | 5.0 | 4.4 | 4.8 | 5.0 | 5.0 | 4.8 | | |
| 3 Snowden | 1.6 | | 5.0 | 4.9 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 4.5 | 5.0 | 5.0 | 4.9 | 2.8 | | 3.0 | 4.3 | 5.0 | 5.0 | 4.3 | 3.9 | 5.0 | 5.0 | 5.0 | 5.0 | 4.3 | 4.5 | 5.0 | 5.0 | 4.7 | | |
| 4 A13125-3C | 0.3 | | | 4.9 | 4.5 | | | 4.7 | | | 5.0 | 4.5 | | | 4.8 | 13.0 | | | 4.5 | | | 4.5 | 3.9 | 4.6 | | | 4.6 | 4.0 | 4.9 | | | 4.4 | | |
| 5 AOR12197-4 | 9.1 | | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 4.4 | | 5.0 | 5.0 | 4.5 | 5.0 | 5.0 | 4.9 | 28.6 | | 1.0 | 3.5 | 4.5 | 5.0 | 3.5 | 4.6 | 4.9 | 5.0 | 5.0 | 5.0 | 4.5 | 4.8 | 3.4 | 5.0 | 4.4 | | |
| 6 CO11037-5W | 0.5 | 0.0 | 4.0 | 4.9 | 4.4 | 4.7 | 5.0 | 4.6 | 0.0 | 5.0 | 5.0 | 4.4 | 4.7 | 5.0 | 4.8 | 8.8 | 1.1 | 2.0 | 4.5 | 5.0 | 5.0 | 4.1 | 3.6 | 5.0 | 5.0 | 5.0 | 5.0 | 4.3 | 4.5 | 5.0 | 5.0 | 4.7 | | |
| 7 CO12235-3W | 0.0 | 0.2 | 5.0 | 5.0 | 4.9 | 5.0 | 5.0 | 5.0 | 0.3 | 5.0 | 5.0 | 4.3 | 5.0 | 5.0 | 4.9 | 3.3 | 0.5 | 4.0 | 4.5 | 5.0 | 5.0 | 4.6 | 4.1 | 5.0 | 5.0 | 5.0 | 5.0 | 4.5 | 4.0 | 4.9 | 5.0 | 4.6 | | |
| 8 CO12293-1W | 2.5 | 0.5 | 4.0 | 4.6 | 4.4 | 5.0 | 4.8 | 4.6 | 0.0 | 5.0 | 5.0 | 4.5 | 5.0 | 4.8 | 4.9 | 5.7 | 3.1 | 2.0 | 4.5 | 4.9 | 4.8 | 4.0 | 3.9 | 4.5 | 5.0 | 4.8 | 4.8 | 4.3 | 4.9 | 5.0 | 4.8 | 4.7 | | |
| 9 CO13232-25W | 0.0 | 1.1 | 4.0 | 5.0 | 4.9 | 5.0 | 5.0 | 4.8 | 0.3 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 | 4.8 | 5.3 | 1.2 | 3.0 | 4.5 | 5.0 | 5.0 | 4.4 | 4.3 | 5.0 | 5.0 | 5.0 | 5.0 | 4.1 | 4.9 | 5.0 | 5.0 | 4.8 | | |
| 10 COOR13270-2 | 0.5 | | 5.0 | 4.9 | 4.9 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 4.4 | 5.0 | 5.0 | 4.9 | 11.3 | | 2.0 | 4.3 | 5.0 | 5.0 | 4.1 | 3.7 | 4.9 | 5.0 | 5.0 | 5.0 | 4.3 | 4.9 | 5.0 | 5.0 | 4.8 | | |
| 11 NYOR14Q9-5 | 0.0 | | 5.0 | 5.0 | 4.9 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | 4.9 | 5.0 | 5.0 | 5.0 | 16.5 | | 2.0 | 4.9 | 5.0 | 5.0 | 4.2 | 3.9 | 4.9 | 5.0 | 5.0 | 5.0 | 4.1 | 4.9 | 5.0 | 5.0 | 4.8 | | |
| 12 NYOR14Q9-9 | 0.0 | | 5.0 | 5.0 | 4.1 | 5.0 | 5.0 | 4.8 | | 5.0 | 5.0 | 4.6 | 5.0 | 5.0 | 4.9 | 2.3 | | 3.0 | 4.5 | 5.0 | 5.0 | 4.4 | 4.2 | 4.9 | 5.0 | 5.0 | 5.0 | 4.0 | 4.5 | 5.0 | 5.0 | 4.6 | | |
| Location Mean | | 0.3 | 4.5 | 4.8 | 4.6 | 5.0 | 5.0 | 4.8 | 0.1 | 4.8 | 5.0 | 4.5 | 5.0 | 5.0 | 4.8 | | 1.7 | 2.3 | 4.4 | 4.9 | 5.0 | 4.2 | 4.0 | 4.8 | 5.0 | 5.0 | 4.9 | 4.2 | 4.7 | 4.8 | 5.0 | 4.7 | | |

¹ Score 1-5, with 1=severe, 5=none.

²Aberdeen, ID growth cracks and greening are recorded in CWT/A

³Tulelake, CA percent of total

TABLE 8: 2022 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 ¹ plus Brown Center | | | | | | | Percent Internal Brown Spot | | | | Percent Net Necrosis Vascular Discoloration | | | | | Blackspot Bruise | | | | |
|----------------------|-------------|--|----------|-----------|----------|----------|----------|---------------|--------------------------------|-----------|-----|---------------|--|----------|----------|----------|---------------|------------------|-----------------|------------------|------------------|------------------|
| | | CA | CO | ID | HRM | DTX | STX | Entry Mean | HRM | DTX | STX | Entry Mean | CA | HRM | DTX | STX | Entry Mean | CO ² | ID ³ | HRM ⁴ | DTX ⁵ | STX ⁵ |
| 1 | Atlantic | | 3 | 40 | 8 | 0 | 0 | 10 | 5 | 50 | 30 | 28 | | 0 | 0 | 0 | 0 | 3.5 | 3.5 | 35 | 5.0 | 5.0 |
| 2 | Lamoka | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 3 | 10 | 3 | 0 | 0 | 3 | 4.0 | 2.6 | 30 | 5.0 | 5.0 |
| 3 | Snowden | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | | 0 | 0 | 0 | 0 | 3.7 | 1.6 | 35 | 5.0 | 5.0 |
| 4 | A13125-3C | | | 0 | 0 | | 0 | 0 | 13 | | | 13 | | 10 | | | 10 | | 3.4 | 8 | | |
| 5 | AOR12197-4 | | 1 | 5 | 0 | 0 | 0 | 1 | 5 | 3 | 0 | 3 | | 3 | 10 | 20 | 11 | 3.2 | 3.5 | 5 | 5.0 | 5.0 |
| 6 | CO11037-5W | 0 | 0 | 3 | 8 | 3 | 0 | 2 | 18 | 0 | 10 | 9 | 3 | 0 | 0 | 0 | 1 | 4.1 | 3.7 | 3 | 5.0 | 5.0 |
| 7 | CO12235-3W | 3 | 1 | 0 | 0 | 17 | 0 | 3 | 3 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4.2 | 4.0 | 13 | 3.3 | 5.0 |
| 8 | CO12293-1W | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 10 | 0 | 8 | 7 | 3 | 0 | 0 | 2 | 4.4 | 3.4 | 3 | 5.0 | 5.0 |
| 9 | CO13232-25W | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 2 | 4.4 | 4.0 | 8 | 5.0 | 5.0 |
| 10 | COOR13270-2 | | 0 | 3 | 20 | 0 | 0 | 5 | 13 | 57 | 10 | 26 | | 0 | 0 | 0 | 0 | 4.3 | 2.5 | 13 | 5.0 | 5.0 |
| 11 | NYOR14Q9-5 | | 8 | 78 | 5 | 1 | 0 | 18 | 3 | 7 | 0 | 3 | | 3 | 0 | 0 | 1 | 4.3 | 3.1 | 35 | 5.0 | 5.0 |
| 12 | NYOR14Q9-9 | | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 50 | 10 | 21 | | 0 | 0 | 0 | 0 | 4.1 | 3.3 | 15 | 5.0 | 5.0 |
| Location Mean | | 1 | 1 | 11 | 3 | 2 | 0 | 3 | 7 | 17 | | 10 | 5 | 2 | 1 | 2 | 2 | 4.0 | 3.2 | 17 | 4.8 | 5.0 |

¹Hollow heart is reported as the percentage of 10 tubers greater than 10 oz. showing the defect.

²Colorado blackspot scores come from a intentionally bruising tubers with a 5 oz. weight from a height of 24" on bud and stem end [1-5(none)].

³Aberdeen, ID blackspot scores from an abrasive peel test [1-5(none)].

⁴Hermiston, OR blackspot score is a percent of total.

⁵Texas blackspot score is from recording naturally occurring bruises observed after harvest [1-5(none)].

TABLE 9: 2022 Western Regional Chipping Potato Variety Trial - CHIP COLOR

| No. Clone | DTX ¹ | | HRM ¹ | | | | CO ¹ | | | | ID ¹ | | | 50 ² Mean |
|-----------------------|------------------|--------------------|------------------|--------------------|------------|--------------------|-----------------|--------------------|------------|--------------------|-----------------|--------------------|------------|-------------------------|
| | Chip 42 | | Chip 40 | | Chip 50 | | Chip 40 | | Chip 50 | | Chip 40 | | Chip 50 | |
| | a | Recon ^b | a | Recon ^b | c | Recon ^d | a | Recon ^b | c | Recon ^d | a | Recon ^b | c | |
| 1 Atlantic | 3.6 | 3.1 | 2.3 | 4.8 | 2.3 | 2.0 | 4.5 | 4.5 | 2.5 | 3.0 | 6.0 | 4.8 | 2.7 | 2.4 |
| 2 Lamoka | 3.1 | 1.5 | 1.9 | 3.9 | 1.9 | 1.6 | 4.0 | 3.0 | 1.5 | 2.5 | 4.8 | 3.1 | 2.0 | 1.7 |
| 3 Snowden | 3.6 | 1.9 | 2.0 | 4.3 | 2.0 | 2.1 | 4.0 | 3.0 | 2.0 | 2.5 | 5.8 | 3.4 | 2.0 | 2.0 |
| 4 A13125-3C | | | 2.1 | 4.1 | 2.1 | 2.0 | | | | | 3.6 | 3.2 | 2.9 | 2.5 |
| 5 AOR12197-4 | 3.7 | 3.0 | 2.5 | 4.6 | 2.5 | 2.4 | 4.0 | 3.5 | 3.0 | 3.5 | 5.6 | 3.8 | 2.8 | 2.7 |
| 6 CO11037-5W | 3.9 | 3.4 | 1.9 | 4.0 | 1.9 | 1.6 | 4.0 | 3.0 | 1.0 | 2.5 | 4.0 | 3.3 | 2.5 | 1.7 |
| 7 CO12235-3W | 3.0 | 1.9 | 1.6 | 4.3 | 1.6 | 1.8 | 3.5 | 3.0 | 1.5 | 1.0 | 3.8 | 3.0 | 2.0 | 1.8 |
| 8 CO12293-1W | 3.4 | 2.2 | 1.8 | 3.9 | 1.8 | 1.9 | 4.0 | 3.5 | 2.0 | 2.0 | 4.3 | 3.5 | 2.1 | 2.0 |
| 9 CO13232-25W | 2.0 | 1.7 | 1.6 | 3.4 | 1.6 | 1.6 | 3.0 | 3.5 | 1.5 | 2.0 | 2.8 | 2.9 | 2.1 | 1.7 |
| 10 COOR13270-2 | 3.2 | 2.6 | 1.9 | 4.0 | 1.9 | 1.8 | 4.5 | 3.5 | 2.5 | 2.5 | 4.8 | 3.3 | 2.3 | 2.2 |
| 11 NYOR14Q9-5 | 2.7 | 1.7 | 1.6 | 4.0 | 1.6 | 1.4 | 3.0 | 3.5 | 1.5 | 2.0 | 4.0 | 2.9 | 1.6 | 1.5 |
| 12 NYOR14Q9-9 | 4.1 | 3.6 | 1.9 | 4.1 | 1.9 | 2.3 | 4.0 | 3.5 | 3.0 | 3.0 | 6.0 | 4.3 | 3.3 | 2.9 |
| Location Means | 3.3 | 2.4 | 1.9 | 4.1 | 1.9 | 1.9 | 3.9 | 3.4 | 2.0 | 2.4 | 4.6 | 3.5 | 2.4 | 2.1 |

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

^a Stored 6 weeks at 42F (TX); 10 weeks at 40F (HRM); 7 weeks at 40F (CO) and 7 weeks at 40F (ID).

^b Stored 6 weeks at 42F plus 2 weeks at 74F (TX); stored 10 weeks at 40F plus 2 weeks at 48F (HRM); stored 7 weeks at 40F plus 3 weeks at 60F (CO); stored 7 weeks at 40F plus 3 weeks at 60F (ID).

^c Stored 10 weeks at 47F (HRM); stored 7 weeks (CO) and 5 weeks at 50F (ID).

^d Stored 10 weeks (HRM) at 47F plus 2 weeks at 48F; stored 7 weeks at 50F plus 3 weeks at 60F (CO); stored 5 weeks at 50F plus 3 weeks at 60F (ID).

² Mean for HRM, CO and ID.

Table 10. 2022 Aberdeen Regional Chip Trial - SOLIDS, DEXTROSE, SUCROSE, PROTEIN, VITAMIN C, AND GLYCOALKALOIDS - ABERDEEN, IDAHO; ANTIOXIDANTS - TEXAS

| Clone | Solids Oven Dry (%) | Sugars | | Protein (%DWB) ² | Vitamin C (mg/100g FWB) | Glycoalkaloids ³ (mg/100gFWB) | Texas Antioxidant Equivalents ⁴ | | |
|--------------|------------------------|---------------------------------|--------------------------------|--------------------------------|----------------------------|---|---|------------------|----|
| | | Dextrose (%FWB) ¹ | Sucrose (%FWB) ¹ | | | | µg Trolox equivalents/gfw ⁵ | AOA ⁶ | |
| 1 | Atlantic | 24.00 | 0.022 | 0.068 | 6.35 | 28.56 | 2.74 | 70.1 | L |
| 2 | Lamoka | 23.30 | 0.001 | 0.088 | 6.52 | 26.24 | 4.14 | 99.8 | L |
| 3 | Snowden | 22.16 | 0.007 | 0.047 | 6.27 | 28.95 | 4.23 | 97.4 | L |
| 4 | A13125-3C | 22.89 | 0.004 | 0.087 | 7.34 | 25.23 | 2.41 | | |
| 5 | AOR12197-4 | 22.16 | 0.007 | 0.089 | 6.49 | 33.01 | 6.07 | 66.9 | L |
| 6 | CO11037-5W | 22.88 | 0.002 | 0.058 | 7.90 | 26.37 | 1.84 | 48.4 | VL |
| 7 | CO12235-3W | 21.63 | 0.001 | 0.060 | 7.92 | 27.57 | 3.39 | 148.0 | M |
| 8 | CO12293-1W | 22.08 | 0.002 | 0.073 | 7.49 | 25.81 | 2.33 | 104.9 | L |
| 9 | CO13232-25W | 19.97 | 0.002 | 0.031 | 8.77 | 29.74 | 3.93 | 106.9 | L |
| 10 | COOR13270-2 | 22.85 | 0.003 | 0.065 | 7.27 | 37.73 | 3.06 | 101.0 | L |
| 11 | NYOR14Q9-5 | 21.85 | 0.003 | 0.061 | 7.49 | 29.02 | 7.03 | 126.7 | L |
| 12 | NYOR14Q9-9 | 22.48 | 0.021 | 0.089 | 6.78 | 29.31 | 2.97 | 78.6 | L |
| Means | 22.36 | 0.006 | 0.068 | 7.22 | 28.96 | 3.68 | 95.3 | | |

¹ FWB = fresh weight basis

² DWB = dry weight basis

³ Lenape Check = 53.8

⁴ 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 methanol 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.

⁵ µg Trolox equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation: $y = -272.42x + 292.13$

⁶ VH=very high (>399), H=high (276-348), M=medium (134-259), L=low (67-127)5,3 enVL=very low (<5). n=6 including t check varieties

TABLE 11: 2022 Western Regional Chipping Potato Variety Trial - DISEASE EVALUATIONS, METRIBUZIN REACTION

| No. Clone | Vert. Wilt/Early Dying | | | | Early Blight | | Common Scab | | Corky Ringspot PROS ⁴ | Corky Ringspot reaction | Soft Rot | Dry rot | PVY % HERM ⁴ | Metr. Reaction AB ⁵ | |
|----------------------|------------------------|--------------|------------|---------------|-----------------|-----------------|--------------|-----------------------|-------------------------------------|----------------------------|-----------------------------------|--------------------------------------|----------------------------|--------------------------------------|-----------------|
| | AB ¹ | | HERM | | AB ¹ | AB ¹ | | | | | <i>Pecto-</i> <i>bacterium</i> | <i>Fusarium</i> <i>sambucinum</i> | | | |
| | (0-9) | AUDPC | (0-9) | AUDPC | (0-9) | AUDPC | Incidence(%) | Serious Defects(%) | | | Incidence (%) | Serious Defects(%) | | | AB ¹ |
| 1 Atlantic | 7.0 | 593 | 8.2 | 1473 | 6 | 360 | 20.2 | 19.8 | -- | -- | -- | 2.7 | 3.5 | 80 | MS |
| 2 Lamoka | 7.3 | 636 | 8.8 | 1675 | 7 | 532 | 18.1 | 12.5 | 17.1 | 11.0 | S | 3.9 | 4.1 | 80 | MR |
| 3 Snowden | 7.0 | 581 | 7.8 | 1319 | 6 | 258 | 29.5 | 10.7 | 23.0 | 11.7 | S | 2.9 | 2.8 | 95 | R |
| 4 A13125-3C | 4.3 | 230 | 8 | 1256 | 5 | 230 | 33.5 | 12.5 | -- | -- | -- | 0.9 | 1.5 | 70 | MR |
| 5 AOR12197-4 | 5.3 | 153 | 8.2 | 1110 | 4 | 153 | 26.1 | 12.9 | 0.0 | 0.0 | R | 0.9 | 3.9 | 60 | MR |
| 6 CO11037-5W | -- | -- | 7.7 | 1213 | -- | -- | -- | -- | 0.0 | 0.0 | R | -- | -- | 55 | MS |
| 7 CO12235-3W | -- | -- | 8.7 | 1438 | -- | -- | -- | -- | 56.7 | 39.2 | S | -- | -- | 65 | MR |
| 8 CO12293-1W | -- | -- | 7.7 | 1401 | -- | -- | -- | -- | 0.0 | 0.0 | R | -- | -- | 80 | MR |
| 9 CO13232-25W | -- | -- | 8.2 | 1365 | -- | -- | -- | -- | 0.0 | 0.0 | R | -- | -- | 80 | MS |
| 10 COOR13270-2 | 5.0 | 360 | 8.5 | 1410 | 6 | 360 | 14.4 | 9.3 | 0.0 | 0.0 | R | 1.3 | 1.1 | 0 | MR |
| 11 NYOR14Q9-5 | 6.0 | 468 | 8 | 1449 | 7 | 468 | 13.5 | 8.3 | 15.7 | 7.8 | MS | 1.6 | 1.7 | 0 | VR |
| 12 NYOR14Q9-9 | 7.3 | 543 | 7.8 | 1429 | 7 | 543 | 23.9 | 11.3 | 15.2 | 9.6 | MS | 2.5 | 4.0 | 0 | R |
| MEANS | 6.2 | 445.5 | 8.1 | 1378.2 | 6.1 | 363.0 | 22.4 | 12.2 | 12.8 | 7.9 | | 2.1 | 2.8 | 55.4 | |
| LSD @ .05 | n.s. | | | | 1.6 | | 24.0 | 16.0 | | | | 0.9 | 1.1 | | |
| Castle Russet | | | | | | | | | 0.0 | 0.0 | R | | | | |

- Evaluations made at Aberdeen, Idaho by Jonathan Whitworth, Hermiston, Oregon by Sagar Sathuvalli; 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 serious defects are the number of tubers with a 3 rating (0-5 scale) or higher, divided by the total number of tubers examined.
- For 0 to 5: 0=none, 5=severe as a combination of tuber area and degree impacted by *Pectobacterium* or *Fusarium sambucinum* inoculations done at Aberdeen
- Corky ringspot readings Prosser, WA by Rich Quick and Launa Cimrhakl
- PVY readings Hermiston, OR from tuber sprouts by Sagar Suthavalli
- Metribuzin Reaction measured at Aberdeen, ID by Chelsey Lowder. VR=very resistant, R=Resistant, MR=Moderately resistant, MS=moderately susceptible, S=susceptible VS=very susceptible

TABLE 12: 2022 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 | HRM | ID | DTX | STX | Entry Mean |
| 1 | Atlantic | | 2.0 | 3.0 | 2.3 | 4.4 | 4.2 | 3.2 | 2.0 | 2.0 | 2.0 | 2.5 | 3.8 | 2.5 |
| 2 | Lamoka | 3.5 | 3.0 | 3.5 | 2.5 | 3.8 | 4.3 | 3.4 | 4.0 | 2.5 | 3.0 | 3.0 | 3.8 | 3.3 |
| 3 | Snowden | | 3.0 | 3.5 | 3.1 | 3.8 | 4.4 | 3.6 | 3.0 | 2.0 | 2.5 | 2.5 | 3.8 | 2.8 |
| 4 | A13125-3C | | | 3.5 | 2.8 | | | 3.1 | | 2.5 | 3.0 | | | 2.8 |
| 5 | AOR12197-4 | | 3.0 | 2.5 | 2.4 | 3.8 | 4.0 | 3.1 | 2.0 | 2.0 | 2.0 | 2.4 | 3.6 | 2.4 |
| 6 | CO11037-5W | 4.0 | 4.0 | 2.5 | 2.8 | 3.3 | 3.6 | 3.4 | 4.0 | 2.0 | 3.0 | 2.3 | 3.6 | 3.0 |
| 7 | CO12235-3W | 4.0 | 2.0 | 2.5 | 3.5 | 3.6 | 3.6 | 3.2 | 4.0 | 2.0 | 3.5 | 3.2 | 3.8 | 3.3 |
| 8 | CO12293-1W | 3.0 | 3.0 | 3.0 | 2.8 | 3.6 | 3.7 | 3.2 | 3.0 | 2.5 | 3.0 | 2.6 | 3.8 | 3.0 |
| 9 | CO13232-25W | 3.5 | 4.0 | 3.0 | 3.3 | 4.2 | 4.0 | 3.7 | 3.0 | 3.5 | 4.0 | 3.8 | 4.0 | 3.7 |
| 10 | COOR13270-2 | | 3.0 | 3.0 | 2.6 | 4.2 | 3.7 | 3.3 | 2.0 | 3.0 | 2.5 | 3.2 | 3.7 | 2.9 |
| 11 | NYOR14Q9-5 | | 3.0 | 3.0 | 1.8 | 4.5 | 3.7 | 3.2 | 4.0 | 2.5 | 3.5 | 3.6 | 3.7 | 3.5 |
| 12 | NYOR14Q9-9 | | 5.0 | 2.0 | 3.3 | 3.7 | 3.7 | 3.5 | 2.0 | 2.0 | 2.0 | 2.0 | 3.6 | 2.3 |
| Location Mean | | 3.6 | 3.2 | 2.9 | 2.7 | 3.9 | 3.9 | 3.3 | 3.0 | 2.4 | 2.8 | 2.8 | 3.7 | 2.9 |

TABLE 13: 2022 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 | 472 2 | 321 68 | 4.3 | 1.087 | 2.4 | 2.5 |
| 2 | Lamoka | Ck | 452 6 | 353 74 | 4.9 | 1.088 | 1.7 | 3.0 |
| 3 | Snowden | Ck | 466 3 | 274 55 | 3.5 | 1.083 | 2.0 | 3.3 |
| 4 | A13125-3C | 1 | 526 | 360 72 | 6.0 | 1.086 | 2.5 | 3.0 |
| 5 | AOR12197-4 | 3 | 452 7 | 298 63 | 4.1 | 1.080 | 2.7 | 3.7 |
| 6 | CO11037-5W | 3 | 432 9 | 312 70 | 4.9 | 1.079 | 1.7 | 2.9 |
| 7 | CO12235-3W | 2 | 375 11 | 238 61 | 3.5 | 1.083 | 1.8 | 3.3 |
| 8 | CO12293-1W | 2 | 454 5 | 350 75 | 4.9 | 1.081 | 2.0 | 3.0 |
| 9 | CO13232-25W | 1 | 449 8 | 286 60 | 3.7 | 1.077 | 1.7 | 3.7 |
| 10 | COOR13270-2 | 2 | 418 10 | 268 60 | 4.0 | 1.082 | 2.2 | 2.9 |
| 11 | NYOR14Q9-5 | 2 | 462 4 | 344 75 | 5.8 | 1.080 | 1.5 | 3.5 |
| 12 | NYOR14Q9-9 | 1 | 480 1 | 331 67 | 4.0 | 1.083 | 2.9 | 2.3 |

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

TABLE 14: 2022 Western Regional Chipping Potato Variety Trial - 3 Year Summary of Graduating Entries

| Clone | 2020 | | | | | 2021 | | | | | 2022 | | | | |
|------------|----------------------------------|--------------------------------|------------------|-------------------------|-------------|----------------------------------|--------------------------------|------------------|-------------------------|-------------|----------------------------------|--------------------------------|------------------|-------------------------|-------------|
| | 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 | 418 7 | 330 79 | 1.094 | 2.2 | 2.6 | 478 3 | 317 69 | 1.090 | 2.0 | 3.0 | 472 2 | 321 68 | 1.087 | 2.4 | 2.46 |
| Snowden | 467 2 | 341 72 | 1.088 | 1.9 | 2.4 | 454 5 | 298 67 | 1.088 | 2.2 | 2.8 | 466 3 | 274 55 | 1.083 | 2.0 | 3.3 |
| AOR12197-4 | 476 1 | 344 73 | 1.088 | 2.5 | 2.6 | 453 6 | 295 66 | 1.084 | 2.2 | 3.0 | 452 7 | 298 63 | 1.080 | 2.7 | 3.7 |
| CO11037-5W | 448 3 | 342 77 | 1.086 | 2.0 | 3.1 | 386 10 | 254 67 | 1.088 | 2.0 | 2.8 | 432 9 | 312 70 | 1.079 | 1.7 | 2.9 |
| Trial Mean | 447 | 321 74 | 1.086 | 2.2 | 2.7 | 449 | 286 65 | 1.087 | 2.1 | 2.8 | 479 | 306 64 | 1.082 | 2.2 | 2.9 |

3 Year Average (2020-2022)

| Clone | Total Yield ¹ | US#1's Yield ¹ % | Specific Gravity | Chip Color ² | Merit Score | Noted Weaknesses | Noted Strengths |
|-------------------|--------------------------|--------------------------------|------------------|-------------------------|-------------|---|---|
| | | | | | | | |
| Snowden | 483 | 356 | 1.086 | 2.0 | 2.8 | | |
| AOR12197-4 | 486 | 331 | 1.084 | 2.5 | 3.1 | yellow flesh, greening (3/3) | resistant to corky ringspot (3/3), high vitamin C (3/3) |
| CO11037-5W | 420 | 342 | 1.084 | 1.9 | 2.9 | low specific gravity (3/3), lower total yield (2/3) | litte hollow heart and vascular discoloration (3/3), resistant to corky ringspot (3/3), good chip color (3/3) |
| Mean ³ | 458 | 304 | 1.085 | 2.2 | 2.8 | | |

¹(CWT/A)²Mean for CO, ID and HRM stored at 50°F³Mean includes all trial entries 2020-2022

Comments and Information from States

| Tulelake, California | | | Tubers/ Plant | Eye Depth | Shape Uniformity | | |
|---------------------------------------|-------------|---|-------------------|-----------------|---------------------|--------------|----------------|
| 1 | Atlantic | | | | | | |
| 2 | Lamoka | Pointy tuber shape | 8.0 | 3.5 | 3.0 | | |
| 3 | Snowden | | | | | | |
| 4 | A13125-3C | | | | | | |
| 5 | AOR12197-4 | | | | | | |
| 6 | CO11037-5W | nice round tuber shape | 6.7 | 4.0 | 3.5 | | |
| 7 | CO12235-3W | heavy skinning at harvest | 6.0 | 4.0 | 4.0 | | |
| 8 | CO12293-1W | heavy skinning at harvest | 6.7 | 4.0 | 3.0 | | |
| 9 | CO13232-25W | | 8.4 | 4.0 | 3.5 | | |
| 10 | COOR13270-2 | | | | | | |
| 11 | NYOR14Q9-5 | | | | | | |
| 12 | NYOR14Q9-9 | | | | | | |
| Aberdeen, Idaho Comments ¹ | | | Sugar Ends (%) | Metri- buzin | Early Blight | Vert Wilt | Rot (CWT/A) |
| 1 | Atlantic | Bumps (3); deeper eyes (2); Rot and HH | 0.0 | MS | 1.9 | 1.6 | 11.1 |
| 2 | Lamoka | Oblong/oval, flat (4); green | 0.0 | MR | 2.8 | 2.5 | 1.0 |
| 3 | Snowden | Small (4); round, uniform (3); deeper eyes (2) | 0.0 | R | 2.0 | 2.4 | 0.0 |
| 4 | A13125-3C | Ats (4); bumps, bigger, flat (2); green | 0.0 | MR | 3.4 | 2.9 | 1.8 |
| 5 | AOR12197-4 | Ats (4); big (3); deep ends, bumps (2); green | 0.0 | MR | 2.9 | 3.6 | 3.7 |
| 6 | CO11037-5W | Few misshapen, few ats, little flat | 0.0 | MS | 2.3 | 3.0 | 0.9 |
| 7 | CO12235-3W | Uniform (3); small, round (2) | 0.0 | MR | 1.8 | 3.5 | 3.6 |
| 8 | CO12293-1W | Patchy skin, oblong (2); rot | 0.0 | MR | 3.3 | 2.8 | 7.5 |
| 9 | CO13232-25W | Few ats (3); flat, uniform (2) | 0.0 | MS | 2.5 | 2.9 | 0.5 |
| 10 | COOR13270-2 | Patchy (3); little flat (2); green | 0.0 | MR | 2.6 | 3.3 | 1.9 |
| 11 | NYOR14Q9-5 | Flat, bumps (4); few misshapen, rot and HH, green | 0.0 | VR | 2.0 | 2.6 | 9.8 |
| 12 | NYOR14Q9-9 | Little flat, few bumps | 0.0 | R | 2.3 | 3.0 | 0.0 |

¹Ats=attached stolons, HH=hollow heart

***Tulelake, California reported a normal growing season and they were able to fully irrigate even with limited water deliveries from the irrigation district.**

***Aberdeen, Idaho reported a cold spring and a hot dry summer.**

Comments and Information from States

| Hermiston, Oregon ¹ | | | Sugar Ends (%) | Tubers/ Plant | | |
|--------------------------------|-------------|--|--------------------------------|-------------------------|--------------------------------------|------------------------------------|
| 1 | Atlantic | pearx4, nipple x2, pty x3, dotty x2 | 29.2 | 11.6 | | |
| 2 | Lamoka | flat x3, pty x3, skinning x3, sticky x3, nipple x2, pear x2 | 20.8 | 10.0 | | |
| 3 | Snowden | deep eyes x3, FBE x3, sticky x3, flakey x3, compressed x2, short x2, irregular x2 | 20.8 | 11.9 | | |
| 4 | A13125-3C | flakey x4, sticky x4, pty x2, XL x4 | 37.5 | 9.1 | | |
| 5 | AOR12197-4 | greening x2, skinning x4, sticky x4, FBE x2, nice x2 | 29.2 | 9.7 | | |
| 6 | CO11037-5W | skinning x4, sticky x2, dotty x2, pear x2, lenticels x2 | 25.0 | 9.0 | | |
| 7 | CO12235-3W | pear x2, sticky x3, lenticels x4, skinning x3, nipple x2, short x3 | 29.2 | 14.1 | | |
| 8 | CO12293-1W | sticky x4, smooth x3, nice x2 | 29.2 | 11.6 | | |
| 9 | CO13232-25W | lenticels x2, sticky x4, short x3 | 16.7 | 14.2 | | |
| 10 | COOR13270-2 | sticky x3 | 33.3 | 10.5 | | |
| 11 | NYOR14Q9-5 | sticky x4, XL x4, skinning x4, disc x2 | 33.3 | 7.6 | | |
| 12 | NYOR14Q9-9 | sticky x4, lenticels x2, pty x2, flat x2 | 20.8 | 11.0 | | |
| Springlake, Texas ² | | | Field Chip Rating ³ | Chip Color ⁴ | | |
| 1 | Atlantic | BOT, buff skin, high tuber number+ | 2.1 | 1.0 | | |
| 2 | Lamoka | high tuber number, oval+, several pointed, feathering, large | 2.2 | 1.0 | | |
| 3 | Snowden | deep bud end, round, buff skin+, high yield, | 2.1 | 1.0 | | |
| 4 | A13125-3C | | | | | |
| 5 | AOR12197-4 | yellow skin, yellow flesh, very round, attached stolons, | 2.8 | 3.0 | | |
| 6 | CO11037-5W | many heat sprouts, very late | 2.5 | 1.0 | | |
| 7 | CO12235-3W | many attached stolons, linked tubers | 1.5 | 1.0 | | |
| 8 | CO12293-1W | smooth skin, oval, smooth skin, bright white beautiful flesh | 1.5 | 1.0 | | |
| 9 | CO13232-25W | buff skin, round, small, high tuber number | 1.5 | 1.0 | | |
| 10 | COOR13270-2 | oval, prominent lenticels | 2.2 | 1.0 | | |
| 11 | NYOR14Q9-5 | large, oval | 2.2 | 1.0 | | |
| 12 | NYOR14Q9-9 | oval, deep bud end, very high yield, a little flat | 2.8 | 1.0 | | |
| Dalhart, Texas | | | Field Chip Rating ³ | Chip Color ⁴ | 40F Initial Chip Rating ³ | 40F Recon Chip Rating ³ |
| 1 | Atlantic | high tuber number+, buff skin++, large, a little flat, BOT+, uniform size and shape, medium size | 1.9 | 1.0 | 3.6 | 3.1 |
| 2 | Lamoka | light skin, bruised++, soft+, oval, smooth skin | 3.1 | 1.0 | 3.1 | 1.5 |
| 3 | Snowden | round+, deep eyes++, buff skin+, , very high tuber number, much lower IBS than Atlantic | 1.8 | 1.0 | 3.6 | 1.9 |
| 4 | A13125-3C | | | | | |
| 5 | AOR12197-4 | SCAB++, round, yellow skin+, compressed+, green tubers, large, nice | 1.6 | 3.0 | 3.7 | 3.0 |
| 6 | CO11037-5W | oblong++, light skin+, bad shape for a chipper+, shriveled, knobs, growth cracks | 2.4 | 1.0 | 3.9 | 3.4 |
| 7 | CO12235-3W | good round shape+, bruised++, feathering+, , very round, shallow eyes | 2.8 | 1.7 | 3.0 | 1.9 |
| 8 | CO12293-1W | bruised++, smooth skin, some greens, soft, large | 1.8 | 1.0 | 3.4 | 2.2 |
| 9 | CO13232-25W | nice+, smooth skin+, very high tuber number, good size and shape, nice | 2.0 | 1.0 | 2.0 | 1.7 |
| 10 | COOR13270-2 | high tuber number++, oval, smooth skin++, nice++ | 2.4 | 1.0 | 3.2 | 2.6 |
| 11 | NYOR14Q9-5 | very high yield+, very large tubers+, nice, smooth skin+, very high tuber number | 1.9 | 1.0 | 2.7 | 1.7 |
| 12 | NYOR14Q9-9 | oval++, smooth skin++, very high tuber number++ | 3.1 | 1.0 | 4.1 | 3.6 |

¹FBE=folded bud end, FSE=folded stem end, GC=growth crack, SB=shatter bruise.

²BOT=best of trial

³Chip rating 1=poor, 5=excellent

⁴Chip color 1=light, 3+=very dark

***Springlake, Texas reported one light hail event during the growing season and 6.7 inches of precipitation.**

****Dalhart, Texas reported the plots received 8.5 inches of precipitation during the growing season and 33 inches of irrigation was applied.**