

2017 SOUTHWESTERN REGIONAL POTATO VARIETY TRIAL REPORT



Table of Contents

| | |
|--|----|
| Description of Clones - 2017 Southwestern Regional Trial | 1 |
| Table 1. Locations, Cooperators, and Cultural Information | 2 |
| Table 2. Percent Stand and Stems/Hill | 3 |
| Table 3. Vine Size and Vine Maturity | 4 |
| Table 4. Total Yield, Yield Rank, and Merit Scores | 5 |
| Table 5. Yield and Percent of U.S. No. 1s | 6 |
| Table 6. Yield and Percent of U.S. No. 1s > 10 oz. | 7 |
| Table 7. Yield and Percent of U.S. No. 1s 6 - 10 oz. | 8 |
| Table 8. Yield and Percent of U.S. No. 1s 4 - 6 oz. | 9 |
| Table 9. Yield and Percent of B (< 4 oz.) Tubers | 10 |
| Table 10. Yield and Percent Culls/No. 2s | 11 |
| Table 11. Specific Gravity | 12 |
| Table 12. Tuber Weight (oz.) and Shape | 13 |
| Table 13. Eye Depth and Growth Cracks | 14 |
| Table 14. Percent Hollow Heart/Brown Center, Blackspot Bruising, Fry Data, and Antioxidant Results | 15 |
| Table 15. Vigor and Flesh Color | 16 |
| Table 16. Notes | 17 |
| Table 17. Notes | 18 |
| Table 18. Summary | 19 |
| Status of Entries following the Southwestern Regional Trial- 2018 Worksheet | 20 |

Description of Clones - 2017 Southwestern Regional Trial

| Entry # | Clone/Cultivar | Parents | | Flower Color | Vine Size | Maturity | Tuber Shape | Skin Type | Entered | | Seed Source | 2017 Year | 2018 Status |
|------------------------|-----------------|----------------|-----------------|--------------|-----------|-----------|-------------|-----------|---------|-------|-------------|-----------|-------------|
| | | Female | Male | | | | | | By | Use | | | |
| Russet Trial | | | | | | | | | | | | | |
| 1 | Russet Norkotah | ND9687-5RU | ND9526-4RU | White | Small | Early | Long | Russet | Check | Fresh | ?? | *** | *** |
| 2 | AOTX05043-1RU | A99032-2TE | Summit Russet | White | Small | Early | Oblong | Russet | TX | Fresh | CO | 1 | |
| 3 | CO09036-2RU | AO98282-5 | CO03267-4RU | White | Large | Medium | Long | Russet | CO | Dual | CO | 1 | |
| 4 | CO09076-3RU | CO03380-2RU | CO03202-1RU | White | Large | Medium | Oblong | Russet | CO | Fresh | CO | 1 | |
| 5 | CO09165-6W | AC02188-1RU | Crestone Russet | White | Med-Small | Early | Long | White | CO | Fresh | CO | 1 | |
| 6 | CO09205-2RU | AOA95154-1 | CO95086-8RU | Light Purple | Medium | Med-Early | Oblong | Russet | CO | Dual | CO | 1 | |
| 7 | COTX05095-2Ru/Y | CO99045-1W/Y | AO96164-1 | White | Medium | Medium | Long | Russet | TX | Fresh | CO | 1 | |
| Specialty Trial | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | |
| 8 | Yukon Gold | Norgleam | W5279-4 | Pink | Medium | Early | Oval | White | Check | Spec | CO | *** | *** |
| 9 | CO09079-5PW/Y | CO04117-5PW/Y | A00286-3Y | Purple | Medium | Med-Early | Oval | White | CO | Spec | CO | 1 | |
| 10 | CO09127-3W/Y | A00293-2Y | CO00412-5W/Y | | Small | Early | Oblong | White | CO | Spec | CO | 1 | |
| 11 | CO09128-3W/Y | A00293-2Y | CO03060-2W/Y | Light Purple | Small | Early | Oval | White | CO | Spec | CO | 1 | |
| 12 | CO09128-5W/Y | A00293-2Y | CO03060-2W/Y | White | Med-Small | Early | Round | White | CO | Spec | CO | 1 | |
| 13 | CO09218-4W/Y | ATC00293 -1W/Y | CO00412-5W/Y | White | Large | Late | Oval | White | CO | Spec | CO | 1 | |
| Purple Flesh | | | | | | | | | | | | | |
| 14 | Purple Majesty | All Blue | ND2008-2 | Blue | Medium | Early | Oval | Purple | Check | Spec | CO | *** | *** |
| 15 | CO08037-2P/P | CO03031-2R/R | CO97215-2P/P | White | Medium | Medium | Oval | Purple | CO | Spec | CO | 1 | |

Table 1. Locations, Cooperators, and Cultural Information

| Locations | Cooperators | Irrigation | | Fertilizer N-P-K-S (lb./A) | Vine Kill Method | Planting Date | Vine Kill Date | Harvest Date | Days to Vine Kill | Herbicides | Pesticides Applied Insecticides | Fungicides |
|--------------------------------------|---|---------------------|--|-------------------------------|-------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|----------------------|--|---|------------------------------------|
| 1. Kern Co. California (KRN) | J. Nunez J. DuBose | Sprinkler | All Trials | | | 2/13/2017 | | 6/5/2017 | 112 | | | |
| 2. Tulelake California (TUL) | R. Wilson D. Culp K. Nicholson S. Peterson | Solid-set sprinkler | Russet Yellow Flesh Purple Flesh | 205-0-0 205-0-0 205-0-0 | Machine Machine Machine | 5/24/2017 5/24/2017 5/24/2017 | 9/12/2017 9/12/2017 9/12/2017 | 10/12/2017 10/9/2017 10/6/2017 | 108 108 108 | Matrix Outlook | Admire Pro Coragen Vydate Clv Vydate Clv | Bravo WS Quadris Tanos |
| 3. San Luis Valley Colorado (SLV) | D. Holm C. Gray | Pivot | | 122-60-80-25S2.5Zn | Reglone | 5/15/2017 | 8/23/2017 | 9/25/2017 | 98 | Chateau Dual Magnum | Mineral Oil Leverage Fulfill | Bravo Ultrex Endura Quadris |
| 4. Springlake Texas (SPR) | I. Vales C. Miller J. Koym D. Scheuring | Pivot | Russet Yellow Flesh Purple Flesh | 108-25-25 | Mechanical | 3/23/2017 | 7/17/2017 6/27/2017 6/27/2017 | 7/24/2017 7/2/2017 7/4/2017 | 114 94 94 | Roundup, Metribuzin 75 CA Dual Magnum, Gly Star Original Matrix, Brawl Stealth, Makaze | Movento Minecto Pro Transform WG Sivanto | Scala Luna Tranquility NUCOP |
| 5. Dalhart Texas (Dal) | I. Vales C. Miller J. Koym D. Scheuring | Pivot | Russet Yellow Flesh Purple Flesh | 206-190-10 | Reglone | 5/16/2017 | 8/30/2017 8/18/2017 8/18/2017 | 9/22/2017 9/11/2017 9/11/2017 | 104 92 92 | K-Tone, ETX Para-Shot 3, Marix SG Cornerstone 5 Plus Zidual StareDown Select Max, Reglone | Cruiser Maxx Fulfill | Curzate 60DF |

Table 2. Percent Stand and Stems/Hill for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | Percent Stand | | | | | Stems per Hill | | | |
|------------------------|-----------------|----------|-------|-----|------|----------------|-------|------|-----|
| | California | Colorado | Texas | | Mean | Colorado | Texas | Mean | |
| | TUL | SLV | SPR | Dal | | SLV | SPR | | |
| Russet Trial | | | | | | | | | |
| 1 | Russet Norkotah | 99 | | 100 | 100 | | | 2.4 | 2.4 |
| 2 | AOTX05043-1RU | 94 | 96 | 100 | 100 | 98 | 2.4 | 1.5 | 1.9 |
| 3 | CO09036-2RU | 99 | 97 | 100 | 100 | 99 | 2.9 | 1.9 | 2.4 |
| 4 | CO09076-3RU | 97 | 96 | 100 | 100 | 98 | 2.4 | 2.0 | 2.2 |
| 5 | CO09165-6W | 99 | 100 | 100 | 100 | 100 | 2.8 | 1.8 | 2.3 |
| 6 | CO09205-2RU | 97 | 100 | 100 | 100 | 99 | 2.4 | 2.0 | 2.2 |
| 7 | COTX05095-2Ru/Y | 99 | 99 | 100 | 100 | 99 | 2.9 | 2.2 | 2.5 |
| Specialty Trial | | | | | | | | | |
| Yellow Flesh | | | | | | | | | |
| 8 | Yukon Gold | 93 | 87 | 100 | 100 | 95 | 2.4 | 1.5 | 2.0 |
| 9 | CO09079-5PW/Y | 98 | 90 | 100 | 100 | 97 | 3.3 | 1.8 | 2.6 |
| 10 | CO09127-3W/Y | 94 | 98 | 100 | 100 | 98 | 4.7 | 3.9 | 4.3 |
| 11 | CO09128-3W/Y | 86 | 82 | 100 | 100 | 92 | 5.0 | 2.4 | 3.7 |
| 12 | CO09128-5W/Y | 98 | 99 | 100 | 100 | 99 | 5.3 | 4.5 | 4.9 |
| 13 | CO09218-4W/Y | 90 | 86 | 100 | 100 | 94 | 3.9 | 2.2 | 3.1 |
| Purple Flesh | | | | | | | | | |
| 14 | Purple Majesty | 99 | 87 | 100 | 100 | 97 | 3.3 | 2.9 | 3.1 |
| 15 | CO08037-2P/P | 91 | 99 | 100 | 100 | 97 | 3.0 | 1.4 | 2.2 |
| Mean | | 96 | 94 | 100 | 100 | 97 | 3.3 | 2.3 | 2.8 |

Table 3. Vine Size and Maturity for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | Vine Size (1-5=largest) | | | | Vine Maturity (1-5=latest) | | | | |
|------------------------|-------------------------|-------|-----|------|----------------------------|-------|-----|------|-----|
| | Colorado | Texas | | Mean | Colorado | Texas | | Mean | |
| | SLV | SPR | Dal | | SLV | SPR | Dal | | |
| Russet Trial | | | | | | | | | |
| 1 | Russet Norkotah | | 3.6 | 3.7 | 3.7 | | 2.0 | 3.5 | 2.7 |
| 2 | AOTX05043-1RU | 3.5 | 3.3 | 4.0 | 3.6 | 2.8 | 1.3 | 3.5 | 2.5 |
| 3 | CO09036-2RU | 4.3 | 3.8 | 4.4 | 4.2 | 3.0 | 4.6 | 4.5 | 4.0 |
| 4 | CO09076-3RU | 3.8 | 3.6 | 4.3 | 3.9 | 2.5 | 3.8 | 4.3 | 3.5 |
| 5 | CO09165-6W | 4.0 | 3.3 | 4.1 | 3.8 | 2.0 | 2.5 | 4.0 | 2.8 |
| 6 | CO09205-2RU | 2.8 | 3.1 | 4.3 | 3.4 | 2.3 | 3.2 | 4.4 | 3.3 |
| 7 | COTX05095-2Ru/Y | 3.0 | 3.3 | 3.7 | 3.3 | 2.8 | 3.3 | 3.4 | 3.2 |
| Specialty Trial | | | | | | | | | |
| Yellow Flesh | | | | | | | | | |
| 8 | Yukon Gold | 3.0 | 3.8 | 4.0 | 3.6 | 2.3 | 3.4 | 3.9 | 3.2 |
| 9 | CO09079-5PW/Y | 3.3 | 3.3 | 3.8 | 3.5 | 2.5 | 3.3 | 3.5 | 3.1 |
| 10 | CO09127-3W/Y | 3.5 | 3.7 | 3.7 | 3.6 | 1.5 | 3.3 | 3.7 | 2.8 |
| 11 | CO09128-3W/Y | 3.0 | 3.5 | 3.8 | 3.4 | 2.0 | 3.3 | 3.5 | 2.9 |
| 12 | CO09128-5W/Y | 3.5 | 3.9 | 3.9 | 3.8 | 1.5 | 3.0 | 3.9 | 2.8 |
| 13 | CO09218-4W/Y | 3.8 | 3.7 | 4.5 | 4.0 | 4.0 | 5.0 | 4.6 | 4.5 |
| Purple Flesh | | | | | | | | | |
| 14 | Purple Majesty | 3.8 | 3.8 | 4.0 | 3.9 | 2.3 | 3.3 | 3.7 | 3.1 |
| 15 | CO08037-2P/P | 3.0 | 2.9 | 4.4 | 3.4 | 3.5 | 4.2 | 4.4 | 4.0 |
| Mean | | | | | | | | | |
| | | 3.5 | 3.5 | 4.0 | 3.7 | 2.5 | 3.3 | 3.9 | 3.2 |

Table 4. Total Yield, Yield Rank Within Type (Specialty, Russet, Red, and Chip), and Merit Score1 (MS), for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | California | | | | | | Colorado | | | Texas | | | | | | Mean | | |
|------------------------|-----------------|------|-------|------|----|-------|----------|----|-------|-------|----|-------|------|----|-------|------|----|-----|
| | KRN | | TUL | | | SLV | | | SPR | | | DAL | | | Cwt/A | Rank | MS | |
| | Cwt/A | Rank | Cwt/A | Rank | MS | Cwt/A | Rank | MS | Cwt/A | Rank | MS | Cwt/A | Rank | MS | | | | |
| Russet Trial | | | | | | | | | | | | | | | | | | |
| 1 | Russet Norkotah | 177 | 7 | 422 | 5 | 2.9 | | | | 271 | 5 | 3.5 | 598 | 1 | 4.4 | 367 | 2 | 3.6 |
| 2 | AOTX05043-1RU | 222 | 4 | 408 | 6 | 2.8 | 322 | 4 | 4.0 | 201 | 7 | 2.5 | 294 | 7 | 3.6 | 289 | 7 | 3.2 |
| 3 | CO09036-2RU | 208 | 6 | 456 | 3 | 3.0 | 359 | 1 | 4.0 | 380 | 3 | 3.4 | 294 | 6 | 3.4 | 339 | 6 | 3.4 |
| 4 | CO09076-3RU | 231 | 2 | 519 | 1 | 1.9 | 358 | 2 | 4.0 | 414 | 1 | 2.6 | 441 | 4 | 4.1 | 392 | 1 | 3.1 |
| 5 | CO09165-6W | 242 | 1 | 398 | 7 | 2.4 | 311 | 6 | 2.0 | 387 | 2 | 3.1 | 425 | 5 | 3.5 | 352 | 5 | 2.8 |
| 6 | CO09205-2RU | 228 | 3 | 425 | 4 | 3.3 | 314 | 5 | 3.0 | 361 | 4 | 3.9 | 477 | 3 | 4.4 | 361 | 3 | 3.6 |
| 7 | COTX05095-2Ru/Y | 215 | 5 | 466 | 2 | 2.6 | 327 | 3 | 4.0 | 251 | 6 | 1.9 | 541 | 2 | 4.0 | 360 | 4 | 3.1 |
| Specialty Trial | | | | | | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | | | | | | |
| 8 | Yukon Gold | 216 | 1 | 416 | 2 | 2.6 | 283 | 4 | 4.0 | 244 | 2 | 3.6 | 479 | 1 | 4.1 | 328 | 2 | 3.6 |
| 9 | CO09079-5PW/Y | 186 | 4 | 412 | 4 | 2.3 | 279 | 5 | 2.0 | 178 | 5 | 3.8 | 279 | 4 | 2.9 | 267 | 4 | 2.7 |
| 10 | CO09127-3W/Y | 187 | 3 | 462 | 1 | 2.9 | 314 | 2 | 4.0 | 247 | 1 | 3.6 | 470 | 2 | 4.0 | 336 | 1 | 3.6 |
| 11 | CO09128-3W/Y | 127 | 6 | 308 | 6 | 2.5 | 250 | 6 | 1.0 | 136 | 6 | 3.5 | 206 | 5 | 3.4 | 206 | 6 | 2.6 |
| 12 | CO09128-5W/Y | 203 | 2 | 413 | 3 | 3.0 | 299 | 3 | 2.0 | 196 | 4 | 3.8 | 373 | 3 | 3.9 | 297 | 3 | 3.2 |
| 13 | CO09218-4W/Y | 167 | 5 | 397 | 5 | 2.9 | 358 | 1 | 5.0 | 214 | 3 | 2.1 | 144 | 6 | 2.8 | 256 | 5 | 3.2 |
| Purple Flesh | | | | | | | | | | | | | | | | | | |
| 14 | Purple Majesty | 191 | 1 | 499 | 1 | 2.3 | 296 | 1 | 2.0 | 172 | 1 | 2.7 | 439 | 1 | 4.4 | 319 | 1 | 2.8 |
| 15 | CO08037-2P/P | 145 | 2 | 345 | 2 | 2.4 | 296 | 1 | 5.0 | 108 | 2 | 2.8 | 181 | 2 | 2.6 | 215 | 2 | 3.2 |
| Mean | | 196 | | 423 | | | 312 | | 3.3 | 251 | | 3.1 | 376 | | 3.7 | 312 | | 3.2 |

Indicates high or strength

Table 5. Yield and Percent of U.S. No. 1's (>4oz.) and Yield Rank Within Type (Specialty, Russet, Red, and Chip) for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | California | | | | | | Colorado ¹ | | | Texas ² | | | | | | Mean | | | |
|------------------------|-----------------|------|---|-------|------|---|-----------------------|------|---|--------------------|------|---|-------|------|---|-------|------|---|----|
| | KRN | | | TUL | | | SLV | | | SPR | | | DAL | | | | | | |
| | Cwt/A | Rank | % | Cwt/A | Rank | % | Cwt/A | Rank | % | Cwt/A | Rank | % | Cwt/A | Rank | % | Cwt/A | Rank | % | |
| Russet Trial | | | | | | | | | | | | | | | | | | | |
| 1 | Russet Norkotah | 176 | 7 | 99 | 364 | 1 | 86 | | | | 194 | 5 | 71 | 486 | 1 | 81 | 305 | 1 | 85 |
| 2 | AOTX05043-1RU | 221 | 4 | 100 | 295 | 5 | 72 | 293 | 2 | 91 | 77 | 7 | 38 | 209 | 6 | 71 | 219 | 7 | 74 |
| 3 | CO09036-2RU | 204 | 6 | 98 | 337 | 3 | 74 | 277 | 5 | 77 | 255 | 3 | 67 | 177 | 7 | 60 | 250 | 6 | 75 |
| 4 | CO09076-3RU | 229 | 2 | 99 | 361 | 2 | 70 | 303 | 1 | 85 | 217 | 4 | 52 | 318 | 5 | 72 | 285 | 3 | 76 |
| 5 | CO09165-6W | 234 | 1 | 97 | 289 | 7 | 73 | 248 | 6 | 80 | 293 | 1 | 76 | 322 | 4 | 76 | 277 | 4 | 80 |
| 6 | CO09205-2RU | 227 | 3 | 100 | 316 | 4 | 74 | 278 | 4 | 89 | 270 | 2 | 75 | 350 | 3 | 73 | 288 | 2 | 82 |
| 7 | COTX05095-2Ru/Y | 215 | 5 | 100 | 294 | 6 | 63 | 282 | 3 | 86 | 98 | 6 | 39 | 370 | 2 | 68 | 252 | 5 | 71 |
| Specialty Trial | | | | | | | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | | | | | | | |
| 8 | Yukon Gold | 214 | 1 | 99 | 322 | 1 | 78 | 240 | 2 | 85 | 188 | 1 | 77 | 379 | 1 | 79 | 269 | 1 | 84 |
| 9 | CO09079-5PW/Y | 186 | 4 | 100 | 90 | 5 | 22 | 68 | 5 | 24 | 31 | 4 | 17 | 50 | 3 | 18 | 85 | 5 | 36 |
| 10 | CO09127-3W/Y | 186 | 3 | 99 | 273 | 2 | 59 | 192 | 3 | 61 | 33 | 3 | 13 | 244 | 2 | 52 | 186 | 2 | 57 |
| 11 | CO09128-3W/Y | 127 | 6 | 100 | 52 | 6 | 17 | 34 | 6 | 14 | 0 | 6 | 0 | 21 | 6 | 10 | 47 | 6 | 28 |
| 12 | CO09128-5W/Y | 201 | 2 | 99 | 125 | 4 | 30 | 110 | 4 | 37 | 2 | 5 | 1 | 46 | 4 | 12 | 97 | 4 | 36 |
| 13 | CO09218-4W/Y | 167 | 5 | 100 | 189 | 3 | 48 | 257 | 1 | 72 | 46 | 2 | 22 | 45 | 5 | 31 | 141 | 3 | 54 |
| Purple Flesh | | | | | | | | | | | | | | | | | | | |
| 14 | Purple Majesty | 190 | 1 | 100 | 189 | 1 | 38 | 181 | 2 | 61 | 28 | 1 | 16 | 143 | 1 | 33 | 146 | 1 | 49 |
| 15 | CO08037-2P/P | 143 | 2 | 99 | 173 | 2 | 50 | 235 | 1 | 79 | 19 | 2 | 18 | 85 | 2 | 47 | 131 | 2 | 59 |
| Mean | | | | | | | | | | | | | | | | | | | |
| | | 195 | | 99 | 245 | | 57 | 214 | | 67 | 117 | | 39 | 216 | | 52 | 198 | | 63 |

Table 6. Yield and Percent of U.S. No. 1's (>10oz.) for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | California | | | | Colorado ³ | | Texas | | | | Mean | | |
|------------------------|------------------|---|------------------|-----|-----------------------|-----|------------------|----|-------|-----|-------|----|----|
| | KRN ¹ | | TUL ² | | SLV | | SPR ⁴ | | DAL | | Mean | | |
| | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | |
| Russet Trial | | | | | | | | | | | | | |
| 1 | Russet Norkotah | 0 | 0 | 202 | 48 | | | 42 | 16 | 107 | 18 | 88 | 20 |
| 2 | AOTX05043-1RU | 0 | 0 | 39 | 9 | 95 | 30 | 4 | 2 | 25 | 9 | 33 | 10 |
| 3 | CO09036-2RU | 0 | 0 | 128 | 28 | 39 | 11 | 51 | 13 | 13 | 4 | 46 | 11 |
| 4 | CO09076-3RU | 6 | 2 | 207 | 40 | 137 | 38 | 48 | 12 | 92 | 21 | 98 | 23 |
| 5 | CO09165-6W | 0 | 0 | 81 | 20 | 21 | 7 | 57 | 15 | 64 | 15 | 45 | 11 |
| 6 | CO09205-2RU | 0 | 0 | 105 | 25 | 35 | 11 | 30 | 8 | 83 | 17 | 51 | 12 |
| 7 | COTX05095-2Ru/Y | 0 | 0 | 35 | 7 | 58 | 18 | 12 | 5 | 14 | 3 | 24 | 6 |
| Specialty Trial | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | |
| 8 | Yukon Gold | 7 | 3 | 123 | 29 | 48 | 17 | 38 | 15 | 139 | 29 | 71 | 19 |
| 9 | CO09079-5PW/Y | 0 | 0 | 11 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 3 | 1 |
| 10 | CO09127-3W/Y | 0 | 0 | 20 | 4 | 20 | 6 | 0 | 0 | 14 | 3 | 11 | 3 |
| 11 | CO09128-3W/Y | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | CO09128-5W/Y | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | CO09218-4W/Y | 0 | 0 | 4 | 1 | 16 | 4 | 0 | 0 | 0 | 0 | 4 | 1 |
| Purple Flesh | | | | | | | | | | | | | |
| 14 | Purple Majesty | 0 | 0 | 6 | 1 | 11 | 4 | 0 | 0 | 3 | 1 | 4 | 1 |
| 15 | CO08037-2P/P | 0 | 0 | 9 | 3 | 29 | 10 | 0 | 0 | 6 | 3 | 9 | 3 |
| Mean | | | | | | | | | | | | | |
| | | 1 | 0 | 65 | 15 | 37 | 11 | 19 | 6 | 37 | 8 | 32 | 8 |

¹ > 11oz

Table 7. Yield and Percent of U.S. No. 1's (6 - 10oz.) for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | California | | | | Texas | | | | Mean | | |
|------------------------|-----------------|----|-------|-----|-------|-----|-------|-----|-------|-----|----|
| | KRN | | TUL | | SPR | | DAL | | Cwt/A | % | |
| | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | | | |
| Russet Trial | | | | | | | | | | | |
| 1 | Russet Norkotah | 16 | 9 | 118 | 28 | 81 | 30 | 200 | 34 | 104 | 25 |
| 2 | AOTX05043-1RU | 8 | 3 | 141 | 35 | 15 | 8 | 71 | 24 | 59 | 17 |
| 3 | CO09036-2RU | 16 | 8 | 126 | 28 | 100 | 26 | 74 | 25 | 79 | 22 |
| 4 | CO09076-3RU | 29 | 13 | 108 | 21 | 96 | 23 | 135 | 31 | 92 | 22 |
| 5 | CO09165-6W | 41 | 17 | 118 | 30 | 110 | 28 | 148 | 35 | 104 | 28 |
| 6 | CO09205-2RU | 4 | 2 | 132 | 31 | 93 | 26 | 154 | 32 | 96 | 23 |
| 7 | COTX05095-2Ru/Y | 5 | 2 | 138 | 30 | 35 | 14 | 161 | 30 | 85 | 19 |
| Specialty Trial | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | |
| 8 | Yukon Gold | 38 | 17 | 137 | 33 | 109 | 45 | 124 | 26 | 102 | 30 |
| 9 | CO09079-5PW/Y | 3 | 1 | 30 | 7 | 3 | 2 | 0 | 0 | 9 | 3 |
| 10 | CO09127-3W/Y | 0 | 0 | 106 | 23 | 8 | 3 | 72 | 15 | 46 | 10 |
| 11 | CO09128-3W/Y | 0 | 0 | 7 | 2 | 0 | 0 | 0 | 0 | 2 | 1 |
| 12 | CO09128-5W/Y | 0 | 0 | 25 | 6 | 0 | 0 | 0 | 0 | 6 | 2 |
| 13 | CO09218-4W/Y | 3 | 2 | 64 | 16 | 7 | 3 | 0 | 0 | 19 | 5 |
| Purple Flesh | | | | | | | | | | | |
| 14 | Purple Majesty | 3 | 2 | 65 | 13 | 4 | 2 | 21 | 5 | 23 | 5 |
| 15 | CO08037-2P/P | 0 | 0 | 64 | 19 | 0 | 0 | 29 | 16 | 23 | 9 |
| Mean | | 11 | 5 | 92 | 21 | 44 | 14 | 79 | 18 | 57 | 15 |

¹ 4-10 oz

Table 8. Yield and Percent of U.S. No. 1's (4 - 6 oz.) for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | California | | | | Texas | | | | Mean | | |
|------------------------|-----------------|-----|-------|-----|-------|-----|-------|-----|-------|-----|----|
| | KRN | | TUL | | SPR | | DAL | | Cwt/A | % | |
| | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | | | |
| Russet Trial | | | | | | | | | | | |
| 1 | Russet Norkotah | 119 | 67 | 44 | 10 | 71 | 26 | 188 | 32 | 106 | 34 |
| 2 | AOTX05043-1RU | 140 | 63 | 115 | 28 | 58 | 29 | 112 | 38 | 106 | 40 |
| 3 | CO09036-2RU | 119 | 57 | 83 | 18 | 108 | 29 | 90 | 31 | 100 | 34 |
| 4 | CO09076-3RU | 135 | 58 | 46 | 9 | 75 | 18 | 91 | 21 | 87 | 27 |
| 5 | CO09165-6W | 142 | 59 | 89 | 22 | 126 | 32 | 110 | 26 | 117 | 35 |
| 6 | CO09205-2RU | 131 | 57 | 79 | 18 | 149 | 41 | 116 | 24 | 119 | 35 |
| 7 | COTX05095-2Ru/Y | 151 | 70 | 121 | 26 | 52 | 21 | 196 | 36 | 130 | 38 |
| Specialty Trial | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | |
| 8 | Yukon Gold | 146 | 68 | 63 | 15 | 41 | 17 | 116 | 24 | 92 | 31 |
| 9 | CO09079-5PW/Y | 88 | 47 | 48 | 12 | 28 | 15 | 50 | 18 | 54 | 23 |
| 10 | CO09127-3W/Y | 94 | 50 | 147 | 32 | 25 | 10 | 158 | 34 | 106 | 31 |
| 11 | CO09128-3W/Y | 1 | 0 | 45 | 14 | 0 | 0 | 21 | 10 | 17 | 6 |
| 12 | CO09128-5W/Y | 70 | 35 | 99 | 24 | 2 | 1 | 46 | 12 | 55 | 18 |
| 13 | CO09218-4W/Y | 111 | 66 | 121 | 30 | 39 | 18 | 45 | 31 | 79 | 36 |
| Purple Flesh | | | | | | | | | | | |
| 14 | Purple Majesty | 89 | 47 | 118 | 24 | 24 | 14 | 118 | 27 | 87 | 28 |
| 15 | CO08037-2P/P | 68 | 47 | 100 | 29 | 19 | 18 | 50 | 28 | 59 | 30 |
| Mean | | 107 | 53 | 88 | 21 | 54 | 19 | 101 | 26 | 87 | 30 |

Table 9. Yield and Percent B (<4 oz.) Tubers for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | California | | | | Colorado | | Texas | | | | Mean | | |
|------------------------|-----------------|-----|-------|-----|----------|-----|-------|-----|-------|-----|-------|-----|----|
| | KRN | | TUL | | SLV | | SPR | | DAL | | Mean | | |
| | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | |
| Russet Trial | | | | | | | | | | | | | |
| 1 | Russet Norkotah | 40 | 22 | 29 | 7 | | | 64 | 24 | 76 | 13 | 52 | 16 |
| 2 | AOTX05043-1RU | 73 | 33 | 97 | 24 | 26 | 8 | 109 | 54 | 84 | 29 | 78 | 30 |
| 3 | CO09036-2RU | 69 | 33 | 84 | 18 | 78 | 22 | 105 | 28 | 80 | 27 | 83 | 26 |
| 4 | CO09076-3RU | 59 | 26 | 44 | 8 | 40 | 11 | 57 | 14 | 60 | 14 | 52 | 15 |
| 5 | CO09165-6W | 51 | 21 | 86 | 22 | 61 | 20 | 74 | 19 | 56 | 13 | 66 | 19 |
| 6 | CO09205-2RU | 93 | 41 | 68 | 16 | 33 | 11 | 75 | 21 | 93 | 20 | 72 | 21 |
| 7 | COTX05095-2Ru/Y | 59 | 27 | 121 | 26 | 41 | 13 | 137 | 55 | 166 | 31 | 105 | 30 |
| Specialty Trial | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | |
| 8 | Yukon Gold | 24 | 11 | 54 | 13 | 38 | 13 | 54 | 22 | 36 | 7 | 41 | 13 |
| 9 | CO09079-5PW/Y | 95 | 51 | 300 | 73 | 209 | 75 | 135 | 76 | 180 | 65 | 184 | 68 |
| 10 | CO09127-3W/Y | 93 | 49 | 167 | 36 | 120 | 38 | 214 | 87 | 226 | 48 | 164 | 52 |
| 11 | CO09128-3W/Y | 127 | 100 | 241 | 78 | 216 | 86 | 136 | 100 | 185 | 90 | 181 | 91 |
| 12 | CO09128-5W/Y | 130 | 64 | 277 | 67 | 187 | 63 | 193 | 99 | 327 | 88 | 223 | 76 |
| 13 | CO09218-4W/Y | 53 | 32 | 192 | 48 | 100 | 28 | 145 | 68 | 85 | 59 | 115 | 47 |
| Purple Flesh | | | | | | | | | | | | | |
| 14 | Purple Majesty | 97 | 51 | 277 | 56 | 109 | 37 | 134 | 78 | 272 | 62 | 178 | 57 |
| 15 | CO08037-2P/P | 75 | 52 | 152 | 44 | 55 | 19 | 83 | 77 | 96 | 53 | 92 | 49 |
| Mean | | 76 | 41 | 146 | 36 | 94 | 32 | 114 | 55 | 135 | 41 | 112 | 41 |

Table 10. Yield and Percent Culls/No. 2s for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | California | | | | Colorado | | Texas | | | | Mean | | |
|------------------------|-----------------|---|------------------|-----|----------|----|-------|-----|-------|----|-------|----|----|
| | KRN | | TUL ¹ | | SLV | | SPR | | DAL | | Mean | | |
| | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | Cwt/A | % | |
| Russet Trial | | | | | | | | | | | | | |
| 1 | Russet Norkotah | 2 | 1 | 29 | 7 | | | 14 | 5 | 26 | 4 | 18 | 4 |
| 2 | AOTX05043-1RU | 1 | 0 | 17 | 4 | 3 | 1 | 15 | 7 | 1 | 0 | 7 | 3 |
| 3 | CO09036-2RU | 4 | 2 | 36 | 8 | 4 | 1 | 15 | 4 | 37 | 13 | 19 | 5 |
| 4 | CO09076-3RU | 1 | 1 | 114 | 22 | 15 | 4 | 138 | 33 | 64 | 14 | 66 | 15 |
| 5 | CO09165-6W | 7 | 3 | 23 | 6 | 2 | 1 | 20 | 5 | 46 | 11 | 20 | 5 |
| 6 | CO09205-2RU | 1 | 0 | 42 | 10 | 3 | 1 | 14 | 4 | 31 | 6 | 18 | 4 |
| 7 | COTX05095-2Ru/Y | 0 | 0 | 51 | 11 | 4 | 1 | 16 | 6 | 5 | 1 | 15 | 4 |
| Specialty Trial | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | |
| 8 | Yukon Gold | 2 | 1 | 39 | 9 | 6 | 2 | 2 | 1 | 64 | 13 | 23 | 5 |
| 9 | CO09079-5PW/Y | 0 | 0 | 23 | 6 | 1 | 0 | 13 | 7 | 49 | 17 | 17 | 6 |
| 10 | CO09127-3W/Y | 1 | 1 | 22 | 5 | 2 | 1 | 1 | 0 | 0 | 0 | 5 | 1 |
| 11 | CO09128-3W/Y | 0 | 0 | 15 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| 12 | CO09128-5W/Y | 2 | 1 | 11 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 |
| 13 | CO09218-4W/Y | 0 | 0 | 16 | 4 | 2 | 1 | 23 | 11 | 14 | 10 | 11 | 5 |
| Purple Flesh | | | | | | | | | | | | | |
| 14 | Purple Majesty | 1 | 0 | 33 | 7 | 5 | 2 | 10 | 6 | 25 | 6 | 15 | 4 |
| 15 | CO08037-2P/P | 2 | 1 | 19 | 5 | 6 | 2 | 5 | 5 | 0 | 0 | 6 | 3 |
| <hr/> | | | | | | | | | | | | | |
| Mean | | 2 | 1 | 33 | 7 | 4 | 1 | 19 | 6 | 24 | 6 | 16 | 4 |

¹ includes over 16 oz tubers

Table 11. Specific Gravity for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | California | Colorado | Texas | | Mean |
|------------------------|------------|----------|-------|-------|--------------|
| | TUL | SLV | SPR | DAL | |
| Russet Trial | | | | | |
| 1 Russet Norkotah | 1.073 | | 1.060 | 1.061 | 1.065 |
| 2 AOTX05043-1RU | 1.094 | 1.089 | 1.063 | 1.068 | 1.079 |
| 3 CO09036-2RU | 1.084 | 1.098 | 1.064 | 1.062 | 1.077 |
| 4 CO09076-3RU | 1.088 | 1.084 | 1.064 | 1.064 | 1.075 |
| 5 CO09165-6W | 1.077 | 1.074 | 1.058 | 1.060 | 1.067 |
| 6 CO09205-2RU | 1.075 | 1.075 | 1.061 | 1.055 | 1.067 |
| 7 COTX05095-2Ru/Y | 1.083 | 1.083 | 1.068 | 1.064 | 1.075 |
| Specialty Trial | | | | | |
| Yellow Flesh | | | | | |
| 8 Yukon Gold | 1.092 | 1.087 | 1.069 | 1.067 | 1.079 |
| 9 CO09079-5PW/Y | 1.082 | 1.074 | 1.058 | 1.050 | 1.066 |
| 10 CO09127-3W/Y | 1.082 | 1.077 | 1.061 | 1.062 | 1.071 |
| 11 CO09128-3W/Y | 1.073 | 1.075 | 1.054 | 1.049 | 1.063 |
| 12 CO09128-5W/Y | 1.084 | 1.088 | 1.064 | 1.064 | 1.075 |
| 13 CO09218-4W/Y | 1.072 | 1.079 | 1.050 | 1.046 | 1.062 |
| Purple Flesh | | | | | |
| 14 Purple Majesty | 1.081 | 1.086 | 1.064 | 1.060 | 1.073 |
| 15 CO08037-2P/P | 1.085 | 1.087 | 1.062 | 1.057 | 1.073 |
| <hr/> | | | | | |
| Mean | 1.082 | 1.083 | 1.061 | 1.059 | 1.071 |

Table 12. Average Tuber Weight (Size) and Shape for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | Weight (oz.) | | | | Shape ¹ | | | | | Length | Length | Length | Length | Width | Width | Width | |
|------------------------|-----------------|-------|-----|------|--------------------|----------|-------|-----|------|------------|----------|--------|--------|----------|-------|-------|------|
| | California | Texas | | Mean | California | Colorado | Texas | | Mean | California | Colorado | Texas | Mean | Colorado | Texas | Mean | |
| | TUL | SPR | DAL | | TUL | SLV | SPR | DAL | | TUL | SLV | DAL | | SLV | DAL | | |
| Russet Trial | | | | | | | | | | | | | | | | | |
| 1 | Russet Norkotah | 8.3 | 4.6 | 6.2 | 6.4 | 4.4 | | 3.8 | 4.2 | 4.1 | 1.89 | | 2.34 | 2.12 | 1.21 | 1.21 | |
| 2 | AOTX05043-1RU | 4.9 | 3.4 | 4.7 | 4.3 | 3.5 | 3.0 | 2.9 | 3.6 | 3.3 | 1.52 | 1.73 | 2.00 | 1.75 | 1.07 | 1.12 | |
| 3 | CO09036-2RU | 5.7 | 4.1 | 4.5 | 4.8 | 4.5 | 5.0 | 4.0 | 3.6 | 4.0 | 1.84 | 2.04 | 2.26 | 2.05 | 1.02 | 1.07 | |
| 4 | CO09076-3RU | 8.0 | 5.3 | 6.2 | 6.5 | 4.8 | 4.0 | 4.1 | 4.6 | 4.5 | 1.98 | 1.96 | 2.59 | 2.18 | 1.13 | 1.20 | |
| 5 | CO09165-6W | 5.1 | 4.8 | 5.0 | 5.0 | 5.0 | 4.0 | 4.3 | 4.6 | 4.6 | 2.10 | 1.98 | 2.98 | 2.35 | 1.15 | 1.18 | |
| 6 | CO09205-2RU | 5.8 | 4.4 | 5.5 | 5.2 | 4.8 | 4.0 | 3.7 | 4.1 | 4.2 | 2.03 | 1.90 | 2.52 | 2.15 | 1.15 | 1.15 | |
| 7 | COTX05095-2Ru/Y | 4.7 | 3.3 | 4.3 | 4.1 | 3.9 | 3.0 | 2.5 | 3.5 | 3.3 | 1.52 | 1.60 | 2.01 | 1.71 | 1.19 | 1.14 | |
| Specialty Trial | | | | | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | | | | | |
| 8 | Yukon Gold | 6.0 | 4.7 | | 5.3 | 2.8 | 2.0 | 3.0 | 2.5 | 2.8 | 1.19 | 1.21 | 1.21 | 1.21 | 1.20 | 1.25 | 1.23 |
| 9 | CO09079-5PW/Y | 2.3 | 1.9 | | 2.1 | 3.0 | 2.0 | 3.0 | 2.6 | 2.9 | 1.30 | 1.33 | 1.41 | 1.35 | 1.22 | 1.15 | 1.19 |
| 10 | CO09127-3W/Y | 3.7 | 1.8 | | 2.8 | 2.1 | 1.0 | 2.0 | 1.0 | 1.7 | 1.06 | 1.06 | 1.07 | 1.06 | 1.21 | 1.22 | 1.22 |
| 11 | CO09128-3W/Y | 2.1 | 0.9 | | 1.5 | 2.8 | 2.0 | 1.5 | 1.3 | 1.8 | 1.34 | 1.21 | 1.22 | 1.26 | 1.15 | 1.18 | 1.17 |
| 12 | CO09128-5W/Y | 2.9 | 1.3 | | 2.1 | 2.0 | 1.0 | 1.0 | 1.0 | 1.3 | 1.09 | 1.00 | 0.94 | 1.01 | 1.18 | 1.22 | 1.20 |
| 13 | CO09218-4W/Y | 3.2 | 2.0 | | 2.6 | 2.5 | 1.0 | 3.0 | 1.8 | 2.4 | 1.16 | 1.14 | 1.21 | 1.17 | 1.32 | 1.20 | 1.26 |
| Purple Flesh | | | | | | | | | | | | | | | | | |
| 14 | Purple Majesty | 2.9 | 1.8 | | 2.3 | 4.5 | 2.0 | 3.5 | 2.1 | 3.4 | 1.68 | 1.34 | | 1.51 | 1.16 | | 1.16 |
| 15 | CO08037-2P/P | 3.4 | 1.7 | | 2.5 | 3.1 | 2.0 | 2.0 | 1.8 | 2.3 | 1.39 | 1.43 | | 1.41 | 1.07 | | 1.07 |
| Mean | | 4.6 | 3.1 | 5.2 | 3.8 | 3.6 | 2.6 | 3.0 | 2.8 | 3.1 | 1.54 | | 1.83 | 1.62 | 1.17 | 1.17 | 1.17 |

¹ 1=round to 5=long

Table 13. Eye Depth and Growth Cracks for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | Eye Depth ¹ | | | | Growth Cracks ² | | | | | |
|------------------------|------------------------|-------|-----|------|----------------------------|----------|-------|-----|------|-----|
| | California | Texas | | Mean | California | Colorado | Texas | | Mean | |
| | TUL | SPR | DAL | | TUL ³ | SLV | SPR | DAL | | |
| Russet Trial | | | | | | | | | | |
| 1 | Russet Norkotah | 3.3 | 3.9 | 3.8 | 3.7 | 1.0 | | 5.0 | 5.0 | 5.0 |
| 2 | AOTX05043-1RU | 3.4 | 4.0 | 4.0 | 3.8 | 0.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 3 | CO09036-2RU | 4.0 | 4.0 | 4.0 | 4.0 | 0.3 | 5.0 | 5.0 | 5.0 | 5.0 |
| 4 | CO09076-3RU | 4.0 | 4.0 | 4.0 | 4.0 | 7.3 | 4.0 | 5.0 | 4.6 | 4.5 |
| 5 | CO09165-6W | 3.5 | 4.0 | 4.0 | 3.8 | 0.2 | 5.0 | 5.0 | 5.0 | 5.0 |
| 6 | CO09205-2RU | 3.6 | 4.0 | 4.0 | 3.9 | 1.6 | 5.0 | 5.0 | 5.0 | 5.0 |
| 7 | COTX05095-2Ru/Y | 3.1 | 3.9 | 4.0 | 3.7 | 2.1 | 5.0 | 5.0 | 5.0 | 5.0 |
| Specialty Trial | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | |
| 8 | Yukon Gold | 3.9 | 3.8 | 4.0 | 3.9 | 0.6 | 4.0 | 5.0 | 5.0 | 4.7 |
| 9 | CO09079-5PW/Y | 3.3 | 3.6 | 4.0 | 3.6 | 0.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 10 | CO09127-3W/Y | 3.6 | 3.8 | 4.0 | 3.8 | 0.8 | 4.0 | 5.0 | 5.0 | 4.7 |
| 11 | CO09128-3W/Y | 3.9 | 4.0 | 4.0 | 4.0 | 0.5 | 5.0 | 5.0 | 5.0 | 5.0 |
| 12 | CO09128-5W/Y | 3.4 | 4.0 | 4.0 | 3.8 | 0.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| 13 | CO09218-4W/Y | 4.0 | 4.0 | 4.0 | 4.0 | 0.6 | 4.0 | 5.0 | 5.0 | 4.7 |
| Purple Flesh | | | | | | | | | | |
| 14 | Purple Majesty | 3.9 | 4.0 | 4.0 | 4.0 | 1.2 | 5.0 | 5.0 | 5.0 | 5.0 |
| 15 | CO08037-2P/P | 3.6 | 4.0 | 4.0 | 3.9 | 1.9 | 4.0 | 5.0 | 5.0 | 4.7 |
| Mean | | 3.6 | 3.9 | 4.0 | 3.8 | 1.2 | 4.6 | 5.0 | 5.0 | 4.9 |

¹ 1=deep to 5=shallow

² 1 to 5=none

³ % of total count

Table 14. Percent Hollow Heart/Brown Center, Blackspot Bruising, Fry Data, and Antioxidant Results for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | Hollow Heart/Brown Center (%) | | | | | Vert Wilt Rating AUDPC ¹ California TUL | Blackspot Bruising | | Fry Data ⁴ | | | Antioxidant Equivalents ⁸ | |
|------------------------|-------------------------------|----------|-------|-----|------|---|--------------------|------------------|-----------------------|------------------|-----------------|--|-------|
| | California | Colorado | Texas | | Mean | | California | Colorado | Colorado | | MS ⁷ | µg Trolox equivalents/gfw ⁹ SPR | |
| | TUL | SLV | SPR | DAL | | | TUL ² | SLV ³ | SLV ⁵ | SLV ⁶ | | | |
| Russet Trial | | | | | | | | | | | | | |
| 1 | Russet Norkotah | 0 | | 0 | 18 | 6 | 1134 | 0 | | | | | 161.8 |
| 2 | AOTX05043-1RU | 0 | 0 | 0 | 3 | 1 | 140 | 0.4 | 4.5 | 2.0 | 1.0 | 5.0 | 173.8 |
| 3 | CO09036-2RU | 0 | 1 | 0 | 0 | 0 | 23 | 0.2 | 4.7 | 1.0 | 0.0 | 5.0 | 158.2 |
| 4 | CO09076-3RU | 0 | 0 | 0 | 3 | 1 | 230 | 0.0 | 5.0 | 1.0 | 1.0 | 5.0 | 159.3 |
| 5 | CO09165-6W | 0 | 0 | 0 | 3 | 1 | 546 | 0.2 | 5.0 | 1.0 | 1.0 | 2.0 | 172.5 |
| 6 | CO09205-2RU | 0 | 0 | 3 | 43 | 11 | 112 | 0.0 | 4.9 | 0.0 | 2.0 | 3.0 | 161.9 |
| 7 | COTX05095-2Ru/Y | 0 | 1 | 0 | 0 | 0 | 303 | 0.1 | 4.5 | 2.0 | 3.0 | 3.0 | 175.2 |
| Specialty Trial | | | | | 0 | | | | | | | | |
| Yellow Flesh | | | | | 0 | | | | | | | | |
| 8 | Yukon Gold | 8 | 0 | 10 | 5 | 6 | 713 | 2.5 | 5.0 | 2.0 | 2.0 | 3.0 | 278.2 |
| 9 | CO09079-5PW/Y | 0 | 0 | 0 | 0 | 0 | 417 | 0.0 | 5.0 | 4.0 | 3.0 | 1.0 | 139.5 |
| 10 | CO09127-3W/Y | 3 | 0 | 0 | 10 | 3 | 534 | 0.0 | 5.0 | 2.0 | 1.0 | 5.0 | 125.3 |
| 11 | CO09128-3W/Y | 0 | 0 | 0 | 0 | 0 | 546 | 0.0 | 5.0 | 3.0 | 1.0 | 2.0 | 127.7 |
| 12 | CO09128-5W/Y | 10 | 0 | 0 | 5 | 4 | 761 | 2.5 | 3.7 | 1.0 | 1.0 | 4.0 | 96.3 |
| 13 | CO09218-4W/Y | 8 | 0 | 10 | 0 | 4 | 122 | 5.0 | 3.4 | 2.0 | 2.0 | 5.0 | 82.2 |
| Purple Flesh | | | | | | | | | | | | | |
| 14 | Purple Majesty | 0 | 0 | 0 | 0 | 0 | 443 | 0.0 | | - | - | - | 286.3 |
| 15 | CO08037-2P/P | 0 | 1 | 0 | 0 | 0 | 313 | 7.5 | | - | - | - | 342.6 |
| Mean | | 2 | 0 | 2 | 5 | 2 | | | 4.6 | 1.8 | 1.5 | 3.6 | 176.1 |

¹Area Under Disease Progress Curve based on foliar early-dying rating taken 77, 83, 89, 96, 104 and 110 days after planting. Higher value is more susceptible

² Percent

³ 1 to 5=none

⁴ 0=light, 5= dark

⁵ at harvest

⁶ 0=light, 5=dark, stored at 45F for 11 weeks

⁷ Process Merit Score, 1-5=excellent

⁸ 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. Sample extraction was performed at TAMU and the DPPH assay was performed in Dr. Anna Hale's lab - USDA Sugar Cane Breeding, Houma, LA by Dr. Himaya

⁹ µg Trolox equivalents/gfw - Absorbance was converted to trolox equivalents based on a standard curve using the following equation: $y=284.86x - 4.9907$

Table 15. Vigor and Flesh Color for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | Vigor ¹ | | | | Flesh Color ² | | | | | |
|------------------------|--------------------|-------|-----|------|--------------------------|----------|-------|-----|------|-----|
| | Colorado | Texas | | Mean | California | Colorado | Texas | | Mean | |
| | SLV | SPR | DAL | | TUL | SLV | SPR | DAL | | |
| Russet Trial | | | | | | | | | | |
| 1 | Russet Norkotah | | 3.5 | 3.7 | 3.6 | | | 1.5 | 1.0 | 1.3 |
| 2 | AOTX05043-1RU | 3.3 | 3.3 | 3.9 | 3.5 | | 1.0 | 1.2 | 1.0 | 1.1 |
| 3 | CO09036-2RU | 3.8 | 3.8 | 4.4 | 4.0 | | 1.0 | 1.2 | 1.0 | 1.1 |
| 4 | CO09076-3RU | 3.3 | 3.6 | 4.2 | 3.7 | | 1.0 | 1.1 | 1.0 | 1.0 |
| 5 | CO09165-6W | 2.8 | 3.2 | 4.0 | 3.3 | | 1.0 | 1.0 | 1.0 | 1.0 |
| 6 | CO09205-2RU | 2.8 | 3.0 | 4.2 | 3.3 | | 1.0 | 1.1 | 1.0 | 1.0 |
| 7 | COTX05095-2Ru/Y | 3.8 | 3.4 | 3.7 | 3.6 | | 3.0 | 3.0 | 2.5 | 2.8 |
| Specialty Trial | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | |
| 8 | Yukon Gold | 3.8 | 3.7 | 3.9 | 3.8 | 2.9 | 2.0 | 2.8 | 2.3 | 2.5 |
| 9 | CO09079-5PW/Y | 2.3 | 3.2 | 3.5 | 3.0 | 3.9 | 4.0 | 3.6 | 2.7 | 3.6 |
| 10 | CO09127-3W/Y | 3.8 | 3.7 | 3.7 | 3.7 | 3.0 | 4.0 | 3.3 | 3.0 | 3.3 |
| 11 | CO09128-3W/Y | 3.3 | 3.3 | 3.8 | 3.5 | 4.0 | 4.0 | 3.3 | 2.5 | 3.4 |
| 12 | CO09128-5W/Y | 4.3 | 3.8 | 3.8 | 4.0 | 4.0 | 4.0 | 3.7 | 3.2 | 3.7 |
| 13 | CO09218-4W/Y | 2.5 | 3.6 | 4.5 | 3.5 | 4.3 | 3.0 | 3.5 | 2.7 | 3.4 |
| Purple Flesh | | | | | | | | | | |
| 14 | Purple Majesty | 3.3 | 3.8 | 4.2 | 3.8 | 5.0 | 5.0 | 3.9 | 3.0 | 4.2 |
| 15 | CO08037-2P/P | 2.3 | 2.5 | 4.2 | 3.0 | 5.0 | 4.0 | 4.5 | 3.6 | 4.3 |
| Mean | | | | | | | | | | |
| | | 3.2 | 3.4 | 4.0 | 3.6 | 4.0 | 2.7 | 2.6 | 2.1 | 2.5 |

¹ 1= poor, 2= fair, 3= medium, 4= vigorous, 5= very vigorous

² 1=light to 5=dark

Table 16. Notes for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | | Texas | |
|------------------------|-----------------|--|--|
| | | SPR | DAL |
| Russet Trial | | | |
| 1 | Russet Norkotah | nice shape | high tuber set, enlarged lenticels+, very nice shape+, uniform size and shape, good russetting, some moon shaped, hearts, pointy |
| 2 | AOTX05043-1RU | smaller tubers, pointed, small, round, pointed, , small, pear shaped+, pointed+, poor shape+, blocky+ | low tuber number+, enlarged lenticels, blocky, not uniform size, small+, pointy+ (culls), attached stolons, very low tuber set+, nice russet skin, stem end dicoration |
| 3 | CO09036-2RU | pointed, pear shape, heat sprouts, nice skin color, heterogenous size, few very large tubers, feathering+, flat, slight vascular discoloration | |
| 4 | CO09076-3RU | knobs, heat sprouts, pointed, knobs, knobs, , rough++, poor shape+, many culls, drop, long skinny | very long tubers, pointy+, knobs++, growth cracks, nice skin |
| 5 | CO09165-6W | long uniform size, nice white flesh, some IBS, high set, white skin | light skin+, long++, skinny, pointy, many culls, smooth skin, too long, not as light skin as other reps |
| 6 | CO09205-2RU | nice tuber shape, heat sprouts, medium size, heterogenous size, nice shape, blocky | very nice+, nice shape, high tuber set, skinny, many eyes, pointy |
| 7 | COTX05095-2Ru/Y | small, round, deer damage+, pointed, blocky, light yellow flesh, too round, | most tubers are medium-small, small+, uniform size and shape+, nice yellow flesh, stem end dicoration |
| Specialty Trial | | | |
| Yellow Flesh | | | |
| 8 | Yukon Gold | large tubers, nice shape, poor internals++ | large not uniform, knobs+, very large tubers+++, smooth skin, no silver scurf |
| 9 | CO09079-5PW/Y | spectacle (pinto), small++, pear shape+, small potato | lost purple color+++, not uniform size and shape, knobs+, small+++, pointy, few tubers, high tuber set |
| 10 | CO09127-3W/Y | nice skin color, smaller than YG, medium, nice flesh and skin, feathering, lots of B's, high set | high tuber set, dirt attached to skin+, uniform size and shape+, high tuber set |
| 11 | CO09128-3W/Y | lots of very small tubers, high set, parent, nice for small potato | low tuber set, small++, shiny skin+, few tubers, smooth skin, not uniform shape |
| 12 | CO09128-5W/Y | BOT for small potato, lots of B's, uniform shape and size, parent | small+++, high tuber set small+++, angular tuber shape, very uniform size and shape++, scab, pink eyes |
| 13 | CO09218-4W/Y | uniform, small tubers, pear shape, heat sprouts++, drop+++, poor internals++ | secondary mini tubers, low tuber set, chain tubers+, small++ |
| Purple Flesh | | | |
| 14 | Purple Majesty | high tuber no, road map, uneven shape, poor skin finish, marbled flesh | high tuber set, oblong, sliver scurf++, not uniform shape, white core |
| 15 | CO08037-2P/P | round, few tubers, small, some white streaking, nice shape, good skin finish | low tuber set+++, sliver scurf++, white core+ |

Table 17. Notes for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | | Colorado | California |
|------------------------|-----------------|---|--|
| | | SLV | TUL |
| Russet Trial | | | |
| 1 | Russet Norkotah | | |
| 2 | AOTX05043-1RU | | signifigant black spot bruise |
| 3 | CO09036-2RU | | resistant to early dying |
| 4 | CO09076-3RU | rough | poor shape uniformity |
| 5 | CO09165-6W | | long tubers, low yield |
| 6 | CO09205-2RU | | good shape uniformity, high merit score |
| 7 | COTX05095-2Ru/Y | yellow flesh | deep eyes, good shape uniformity |
| Specialty Trial | | | |
| Yellow Flesh | | | |
| 8 | Yukon Gold | | |
| 9 | CO09079-5PW/Y | small, good yellow nice type, nice yellow | lumpy shape, inconsistent color splash, heavy russetting |
| 10 | CO09127-3W/Y | | high incidence of shatter bruise |
| 11 | CO09128-3W/Y | small, good yellow | low yield |
| 12 | CO09128-5W/Y | small, dark yellow | 10% hollow heart |
| 13 | CO09218-4W/Y | flat, nice yellow | shallow eyes |
| Purple Flesh | | | |
| 14 | Purple Majesty | | |
| 15 | CO08037-2P/P | white spots in flesh | brown internal vascular discoloration |

Table 18. Summary for Clones in the Southwestern Regional Trial, 2017

| Clone / Variety | Field Data | | | | Yield Qualities | | | | | Tuber Description | | | | | |
|------------------------|-----------------|------------|-----------|-----------|-----------------|-------|--------------------|------|---------|-------------------|------------------|-------------|--------------|------------|--------|
| | % Stand | Stems/hill | Vine Size | Vine Mat. | Total Yield | % #1s | % >10 ¹ | % <4 | % Culls | Merit Score | Specific Gravity | Tuber Shape | Tuber Weight | Skin Color | |
| Russet Trial | | | | | | | | | | | | | | | |
| 1 | Russet Norkotah | 100 | 2.4 | 3.7 | 2.7 | 367 | 85 | 20 | 16 | 4 | 3.6 | 1.065 | Long | 6.4 | Russet |
| 2 | AOTX05043-1RU | 98 | 1.9 | 3.6 | 2.5 | 289 | 74 | 10 | 30 | 3 | 3.2 | 1.079 | Oblong | 4.3 | Russet |
| 3 | CO09036-2RU | 99 | 2.4 | 4.2 | 4.0 | 339 | 75 | 11 | 26 | 5 | 3.4 | 1.077 | Long | 4.8 | Russet |
| 4 | CO09076-3RU | 98 | 2.2 | 3.9 | 3.5 | 392 | 76 | 23 | 15 | 15 | 3.1 | 1.075 | Oblong | 6.5 | Russet |
| 5 | CO09165-6W | 100 | 2.3 | 3.8 | 2.8 | 352 | 80 | 11 | 19 | 5 | 2.8 | 1.067 | Long | 5.0 | White |
| 6 | CO09205-2RU | 99 | 2.2 | 3.4 | 3.3 | 361 | 82 | 12 | 21 | 4 | 3.6 | 1.067 | Oblong | 5.2 | Russet |
| 7 | COTX05095-2Ru/Y | 99 | 2.5 | 3.3 | 3.2 | 360 | 71 | 6 | 30 | 4 | 3.1 | 1.075 | Long | 4.1 | Russet |
| Specialty Trial | | | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | | | |
| 8 | Yukon Gold | 95 | 2.0 | 3.6 | 3.2 | 328 | 84 | 19 | 13 | 5 | 3.6 | 1.079 | Oval | 5.3 | White |
| 9 | CO09079-5PW/Y | 97 | 2.6 | 3.5 | 3.1 | 267 | 36 | 1 | 68 | 6 | 2.7 | 1.066 | Oval | 2.1 | White |
| 10 | CO09127-3W/Y | 98 | 4.3 | 3.6 | 2.8 | 336 | 57 | 3 | 52 | 1 | 3.6 | 1.071 | Oblong | 2.8 | White |
| 11 | CO09128-3W/Y | 92 | 3.7 | 3.4 | 2.9 | 206 | 28 | 0 | 91 | 1 | 2.6 | 1.063 | Oval | 1.5 | White |
| 12 | CO09128-5W/Y | 99 | 4.9 | 3.8 | 2.8 | 297 | 36 | 0 | 76 | 1 | 3.2 | 1.075 | Round | 2.1 | White |
| 13 | CO09218-4W/Y | 94 | 3.1 | 4.0 | 4.5 | 256 | 54 | 1 | 47 | 5 | 3.2 | 1.062 | Oval | 2.6 | White |
| Purple Flesh | | | | | | | | | | | | | | | |
| 14 | Purple Majesty | 97 | 3.1 | 3.9 | 3.1 | 319 | 49 | 1 | 57 | 4 | 2.8 | 1.073 | Oval | 2.3 | Purple |
| 15 | CO08037-2P/P | 97 | 2.2 | 3.4 | 4.0 | 215 | 59 | 3 | 49 | 3 | 3.2 | 1.073 | Oval | 2.5 | Purple |

2018 Southwestern Regional Trial Entries

| Entry # | Clone/Cultivar | Parents | | Flower Color | Vine Size | Maturity | Tuber Shape | Skin Type | Entered | | Seed Source | 2018 Year | 2019 Status | Notes |
|------------------------|-----------------|---------------|----------------|---------------|-----------|----------|-------------|-------------|---------|-------|-------------|-----------|-------------|-------|
| | | Female | Male | | | | | | By | Use | | | | |
| Russet Trial | | | | | | | | | | | | | | |
| 1 | Russet Norkotah | ND9687-5RU | ND9526-4RU | White | Small | Early | Long | Russet | Check | Fresh | ?? | *** | *** | |
| 2 | CO10087-4RU | CO03367-1RU | Mercury Russet | White | Medium | Early | Oblong | Russet | CO | Dual | CO | 1 | | |
| 3 | CO10091-1RU | CO03371-4RU | CO98067-7RU | White | Medium | Medium | Oblong | Russet | CO | Dual | CO | 1 | | |
| Red Trial | | | | | | | | | | | | | | |
| 4 | Chieftain | La 1354 | Ia 1027-18 | Lavender | Med-Large | Medium | Oblong | Lt. Red | Check | Fresh | CO | *** | *** | |
| 5 | Red LaSoda | Triumph | Katahdin | Red-purple | Med | Medium | Oval | Lt. Red | Check | Fresh | CO | *** | *** | |
| 6 | ATX02263-1R/Y | Inca Gold | A92653-6R | | Large | Late | Round | Red | TX | Fresh | CO | 1 | | |
| Specialty Trial | | | | | | | | | | | | | | |
| Yellow Flesh | | | | | | | | | | | | | | |
| 7 | Yukon Gold | Nogleam | W5279-4 | Pink | Medium | Early | Oval | White | Check | Spec | CO | *** | *** | |
| 8 | AC10376-1W/Y | Gala | Granola | White | Large | Med-Late | Oval | White | CO | Spec | CO | 1 | | |
| 9 | CO10064-1W/Y | CO00412-5W/Y | CO04099-4W/Y | Purple | Large | Medium | Round | White | CO | Spec | CO | 1 | | |
| 10 | CO10097-2W/Y | CO04067-10W/Y | CO00412-5W/Y | White | Large | Medium | Round | White | CO | Spec | CO | 1 | | |
| 11 | CO10098-4W/Y | CO04099-3W/Y | CO04099-4W/Y | Dk red purple | Med-Large | Medium | Round | White | CO | Spec | CO | 1 | | |
| 12 | CO10098-5W/Y | CO04099-3W/Y | CO04099-4W/Y | Red purple | Medium | Medium | Oval | White | CO | Spec | CO | 1 | | |
| | | | | | | | | | | | | 1 | | |
| Chip Trial | | | | | | | | | | | | | | |
| 13 | Atlantic | Wauseon | B5141-6 | Red-purple | Med | Medium | Oval | Scaley-buff | Check | Chip | CO | *** | *** | |
| 14 | Snowden | B5141-6 | Wischip | White | Large | Late | Oblong | White | Check | Chip | CO | *** | *** | |
| 15 | CO10073-7W | CO02321-4W | CO02024-9W | White | Med-small | Medium | Round | White | CO | Chip | CO | 1 | | |
| 16 | CO10076-4W | CO03243-3W | CO02024-9W | White | Medium | Medium | Round | White | CO | Chip | CO | 1 | | |

Compiled by Jeff Koym*, Douglas Scheuring, Isabel Vales, and Creighton Miller

Cover by Angel Chappell

Department of Horticultural Sciences Texas A&M University

College Station and Lubbock*

California data provided by Joe Nunez, Jed DuBose (Bakersfield),

Rob Wilson, and Darrin Culp (Tule Lake)

Colorado data provided by David Holm and Caroline Gray