# Florida Potato Variety Trial Report, 2014

# Volume 5

UF UNIVERSITY of FLORIDA

HORTICULTURAL SCIENCES DEPARTMENT
INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

UF Florida Partnership for Water, Agriculture, and Community Sustainability at Hastings
UNIVERSITY of FLORIDA

UF UNIVERSITY of FLORIDA
IFAS Extension

# FLORIDA POTATO VARIETY TRIAL REPORT, 2014

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## PHOTOGRAPH

Cover photo: Potato variety trial planting at the Hastings Research and Extension Center February 4, 2015. Lincoln Zotarelli.

## ACKNOWLEDGEMENTS

Many talented and dedicated people assisted in these experiments during the potato season of 2014. The variety evaluation team is indebted to Dana Burhans for her hard work and technical expertise, and to Allison Beyer, Scott Taylor, Bart Herrington and Scott Chambers for their hard work. Without the commitment and effort from these individuals, the variety evaluation program would not be possible.

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# CHAPTER 1. INTRODUCTION

## *General Potato Production Information*

Potato clones were obtained from university, government, and industry breeding programs. Clones progress through the evaluation program following the track described in the Potato Variety Evaluation Flowchart (Figure 1, page 10).

The trials were conducted under condition that represents the grower's practices for potatoes (*Solanum tuberosum* L.) production in the Tri-County Agricultural Area (TCAA) around Hastings, Florida. The research plots were irrigated with seepage irrigation. In this system, the perched water table depth is managed by water flow into irrigation furrows spaced between beds. Potatoes were grown in 60 feet wide beds. Each bed was separated by irrigation furrows. Each bed consisted of sixteen raised potato rows. The spacing between potato rows was 40 inches (center to center). A clay layer underlies the topsoil at a depth of 3 to 5 feet in the Tri-County Agricultural Area (TCAA).

Variety trials, unless noted, were conducted at the University of Florida/IFAS Hastings Research and Extension Center at Hastings, FL research and demonstration farm. HREC is part of the University of Florida/IFAS network of research and demonstration farms located around the state to conduct research on important horticultural crops. The soil at the field site is classified as Ellzey fine sand (sandy, siliceous, hyperthermic Arenic Ochraqualf; sand 93%, < 1% clay, < 6% silt).

Potatoes were planted following a sorghum/sudan grass summer cover crop (*Sorghum bicolor* (L.) Moench x *S. arundinaceum* (Desv.) Stapf var. SX17, Dekalb). Cover crop was incorporated into the potato beds in October, 2013. Potato beds were fumigated with Pic-Clor 60, 11 gal/A (1,3-dichloropropene 39%, and chloropicrin 59.4%) in late December 2013. Potato seed pieces were dusted with fungicide (Maxim) prior to planting. Admire Pro (8.7 oz/A), Quadris,(10.4 oz/A), and Vydate C-LV (68 oz/A) were applied in a banded spray in the furrow after planting but before the seed was covered with soil. Dual Magnum (16 oz/A) and TriCor DF (8 oz/A) was broadcast sprayed at "boarding off" for weed control. Fungicides and insecticides were applied on a schedule during the season based on IPM practices. Fresh market tablestock variety plots were vine-killed by chemical desiccation with glufosinate-ammonium (Rely 280, 21 oz/A)

Fertilizer (14-6-12, 100 lb/acre N granular) was incorporated into the beds 2 to 3 days prior to planting, unless otherwise noted. One side-dress fertilizer application (14-0-12, 130 lb/acre N granular) was made in all trials during the season, unless otherwise noted. Side-dress application dates were March 20, and April 3 and 9, 2014.

Potato seed pieces were hand cut (approx. 2.5 oz) and hand planted on an 8-inch within row spacing unless otherwise noted. Plant growth characteristics were rated during the season following the descriptions listed in Table 1. Plant type was rated at full flower approximately

60 days after planting. No growth enhancers or chemicals to enhance skin color were used in any trial unless otherwise noted.

Plots were harvested with a single-row, commercial potato harvester. Potatoes were graded using commercial grading equipment. Culls were removed and remaining potatoes were separated into six size classes and weighed. Specific gravity was measured on a random 20-tuber sample from each plot using the weight-in-air/weight-in-water method. A random sample was rated for external appearance characteristics. External tuber quality characteristics were rated following the descriptions in Table 2. A second 20-tuber sample was collected and each tuber cut into fourths and rated for hollow heart (HH), brown rot (BR), corky ringspot (CRS), internal heat necrosis (IHN), and brown center (BC). BC was rated as light, moderate, or heavy if the cut pieces displayed the respective defects.

Sub-samples of potatoes from the USPB/SFA trial were shipped to Utz Quality Foods and Wise Foods, Inc. respectively. Chips were prepared following the procedures outlined in the Snack Food Association Chipping Potato Handbook (1995). Chips fried by Wise utilized a 1-5 rating scale. Chips fried by Utz utilized the Hunter Lab rating scale. Chip visual scores are presented in their respective chapters.

## ***Seasonal Weather and Growing Conditions***

Overall growing conditions for the 2014 growing season were rated as poor to fair. The beginning of the season was very wet with above average rainfall in February and March. As a result, slow plant growth and less plant vigor was observed. Overall temperatures were near normal for the season. There were no freeze events from the planting date forward. Total and marketable yields were fair for most clones.

## ***Production***

There were no major changes to the production system in 2014.

Figure 1. Potato variety program evaluation flowchart.

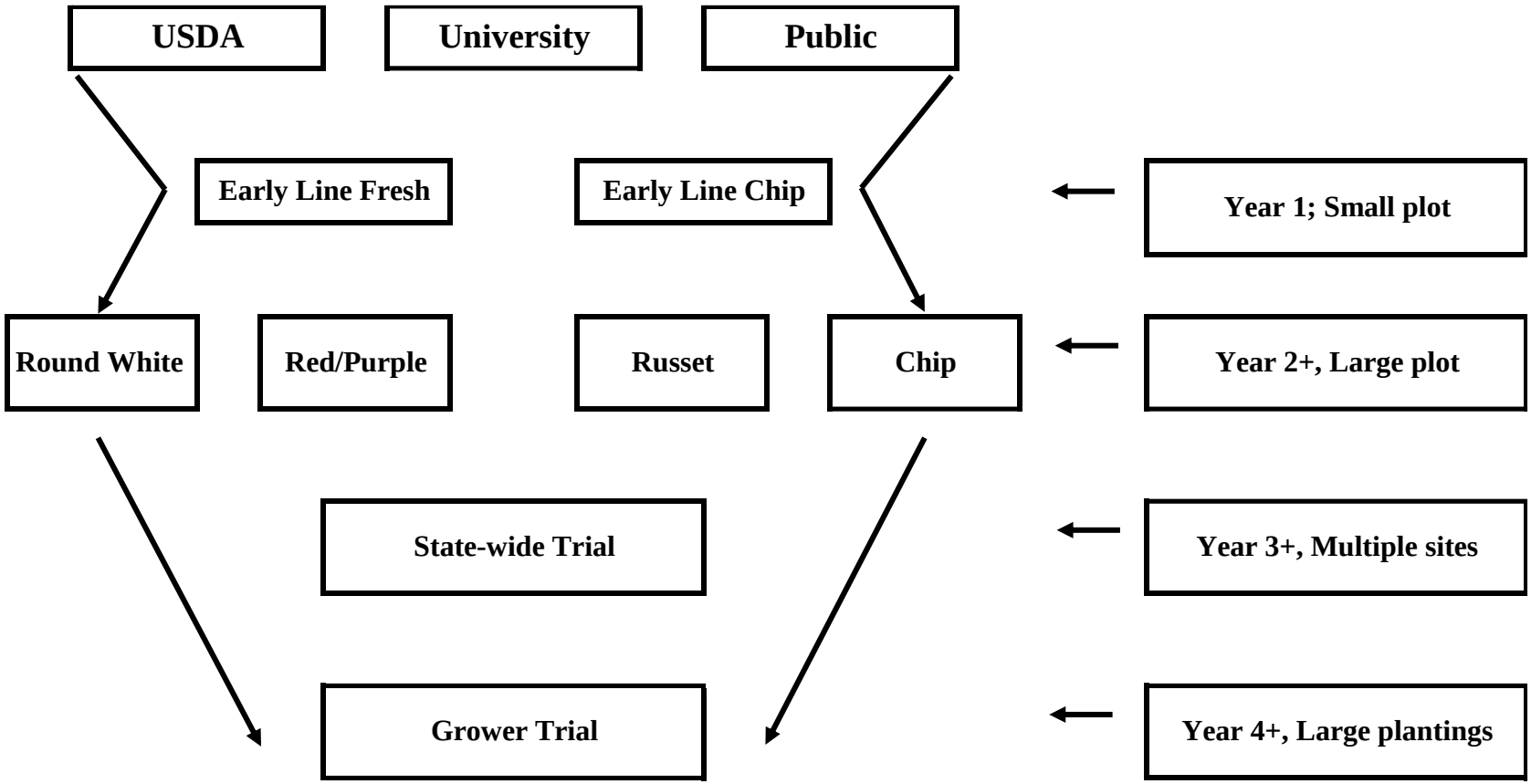

Table 1. Plant growth characteristics

| Rating | Early Vigor (plant height) | Vine Type | Vine Maturity at Harvest/Vine Kill |
|---|---|---|---|
| 1 | no emergence | decumbent – poor | dead |
| 2 | leaves in rosette | decumbent – fair | +- |
| 3 | plants < 2 in | decumbent – good | yellow and dying |
| 4 | plants 2 to 4 in | spreading – poor | +- |
| 5 | plants 4 to 6 in | spreading – fair | moderately senesced |
| 6 | plants 6 to 8 in | spreading – good | +- |
| 7 | plants 8 to 10 in | upright – poor | starting to senesce |
| 8 | plants 10 to 12 in | upright – fair | +- |
| 9 | plants > 12 in | upright – good | green and vigorous |

Adapted from Sisson and Porter, 2002.

Table 2. Internal and external potato tuber characteristics.

| Rating | Internal Flesh Color | Skin Color | Skin Texture | Tuber Shape | Eye Depth | Overall Appearance |
|---|---|---|---|---|---|---|
| 1 | White | Purple | Partial Russet | Round | Very Deep | Very Poor |
| 2 | Cream | Red | Heavy Russet | Mostly Round | +- | +- |
| 3 | Light Yellow | Pink | Mod. Russet | Round to Oblong | Deep | Poor |
| 4 | Medium Yellow | Dark Brown | Light Russet | Mostly Oblong | +- | +- |
| 5 | Dark Yellow | Brown | Netted | Oblong | Intermediate | Fair |
| 6 | Pink | Tan | Slightly Netted | Oblong to Long | +- | +- |
| 7 | Red | Buff | Mod. Smooth | Mostly Long | Shallow | Good |
| 8 | Blue | White | Smooth | Long | +- | +- |
| 9 | Purple | Cream | Very Smooth | Cylindrical | Very Shallow | Excellent |

Adapted from Sisson and Porter, 2002.

# CHAPTER 2. USDA 2nd YEAR VARIETY TRIAL, 2014

### *General Comments*

A goal of the 2nd year USDA trial is to continue evaluating new clones for production potential in Florida. The entries in this trial were selected from an early generation clone trial conducted in 2013.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 4, 2014 |
| Vine Kill Dates | N/A |
| Harvest Date | May 30, 2014 |
| Season Length | 115 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 11 (Standard: Atlantic) |
| Number of Clones | 36 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 1 |
| Plot Size | 16 ft (4.9 m) |

***Production Facts***

| | |
|---|---|
| Early Vigor Ratings | 43 DAP |
| Highest Total Yield | B3085-3 (411 cwt/acre or 46.0 T/ha) |
| Highest Marketable Yield | Snowden (265 cwt/acre or 29.6 T/ha) |
| Best Appearance Rating | Peter Wilcox, Satina, B3097-7, NC426-2 (8, very good) |

Table 3. Production facts for 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | MFX | 300 | 230 | 100 | 4 | 14 | 77 | 6 | 0 | 0 | 82 | 6 | 1.074 |
| Elkton | USDA | 386 | 220 | 96 | 6 | 36 | 57 | 1 | 0 | 0 | 58 | 1 | 1.070 |
| Fabula | MFX | 213 | 145 | 63 | 5 | 14 | 67 | 10 | 3 | 0 | 81 | 13 | 1.074 |
| Goldrush | MFX | 283 | 105 | 46 | 10 | 51 | 39 | 0 | 0 | 0 | 39 | 0 | 1.057 |
| Harley Blackwell | MFX | 316 | 154 | 67 | 8 | 42 | 50 | 0 | 0 | 0 | 50 | 0 | 1.075 |
| LaChipper | MFX | 265 | 154 | 67 | 9 | 33 | 59 | 0 | 0 | 0 | 59 | 0 | 1.064 |
| Peter Wilcox | MFX | 342 | 163 | 71 | 6 | 46 | 48 | 0 | 0 | 0 | 48 | 0 | 1.067 |
| Red LaSoda | MFX | 258 | 155 | 68 | 5 | 29 | 67 | 0 | 0 | 0 | 67 | 0 | 1.060 |
| Satina | MFX | 387 | 241 | 105 | 5 | 27 | 66 | 3 | 0 | 0 | 68 | 3 | 1.058 |
| Snowden | MFX | 340 | 265 | 116 | 1 | 19 | 77 | 3 | 0 | 0 | 80 | 3 | 1.073 |
| Yukon Gold | MFX | 265 | 131 | 57 | 3 | 38 | 59 | 0 | 0 | 0 | 59 | 0 | 1.066 |
| B2996-1 | USDA | 217 | 59 | 26 | 9 | 63 | 29 | 0 | 0 | 0 | 29 | 0 | 1.072 |
| B3005-9 | USDA | 227 | 46 | 20 | 21 | 57 | 20 | 2 | 0 | 0 | 22 | 2 | 1.074 |
| B3010-2 | USDA | 238 | 173 | 75 | 4 | 14 | 82 | 0 | 0 | 0 | 82 | 0 | 1.070 |
| B3012-3 | USDA | 310 | 198 | 86 | 4 | 29 | 67 | 0 | 0 | 0 | 67 | 0 | 1.075 |
| B3034-9 | USDA | 200 | 73 | 32 | 13 | 47 | 40 | 0 | 0 | 0 | 40 | 0 | 1.064 |
| BNC363-3 | USDA | 296 | 231 | 101 | 3 | 15 | 82 | 0 | 0 | 0 | 82 | 0 | 1.070 |
| B2942-6 | USDA | 244 | 51 | 22 | 25 | 53 | 22 | 0 | 0 | 0 | 22 | 0 | 1.060 |
| BNC318-6 | USDA | 349 | 200 | 87 | 5 | 35 | 60 | 0 | 0 | 0 | 60 | 0 | 1.060 |
| B2833-8 | USDA | 246 | 48 | 21 | 22 | 57 | 21 | 0 | 0 | 0 | 21 | 0 | 1.074 |

Table 3(cont'd). Production facts for 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B3082-2 | USDA | 269 | 97 | 42 | 12 | 51 | 37 | 0 | 0 | 0 | 37 | 0 | 1.070 |
| B3082-22 | USDA | 289 | 118 | 51 | 9 | 49 | 43 | 0 | 0 | 0 | 43 | 0 | 1.070 |
| B3083-4 | USDA | 340 | 236 | 103 | 5 | 22 | 62 | 8 | 3 | 0 | 72 | 11 | 1.066 |
| B3083-6 | USDA | 336 | 174 | 76 | 5 | 39 | 52 | 2 | 2 | 0 | 56 | 4 | 1.065 |
| B3083-8 | USDA | 410 | 228 | 99 | 6 | 33 | 62 | 0 | 0 | 0 | 62 | 0 | 1.069 |
| B3083-9 | USDA | 263 | 119 | 52 | 6 | 46 | 48 | 0 | 0 | 0 | 48 | 0 | 1.080 |
| B3083-11 | USDA | 397 | 195 | 85 | 11 | 39 | 51 | 0 | 0 | 0 | 51 | 0 | 1.075 |
| B3083-13 | USDA | 286 | 175 | 76 | 6 | 30 | 60 | 4 | 0 | 0 | 64 | 4 | 1.073 |
| B3084-3 | USDA | 343 | 189 | 83 | 5 | 38 | 55 | 2 | 0 | 0 | 57 | 2 | 1.074 |
| B3085-3 | USDA | 411 | 218 | 95 | 7 | 39 | 54 | 0 | 0 | 0 | 54 | 0 | 1.069 |
| B3091-4 | USDA | 375 | 168 | 73 | 8 | 43 | 50 | 0 | 0 | 0 | 50 | 0 | 1.063 |
| B3097-7 | USDA | 331 | 176 | 77 | 5 | 39 | 56 | 0 | 0 | 0 | 56 | 0 | 1.065 |
| B3100-1 | USDA | 264 | 43 | 19 | 22 | 61 | 17 | 0 | 0 | 0 | 17 | 0 | - |
| B3100-6 | USDA | 264 | 76 | 33 | 16 | 52 | 32 | 0 | 0 | 0 | 32 | 0 | 1.060 |
| B3100-7 | USDA | 257 | 95 | 41 | 10 | 51 | 39 | 0 | 0 | 0 | 39 | 0 | 1.070 |
| B3100-10 | USDA | 313 | 102 | 44 | 15 | 50 | 35 | 0 | 0 | 0 | 35 | 0 | 1.067 |
| B3101-1 | USDA | 319 | 179 | 78 | 5 | 32 | 61 | 2 | 0 | 0 | 63 | 2 | 1.053 |
| B3103-1 | USDA | 284 | 122 | 53 | 11 | 40 | 47 | 2 | 0 | 0 | 49 | 2 | 1.047 |
| B3107-2 | USDA | 306 | 105 | 46 | 11 | 53 | 36 | 0 | 0 | 0 | 36 | 0 | 1.060 |
| B3107-4 | USDA | 292 | 100 | 44 | 10 | 55 | 35 | 0 | 0 | 0 | 35 | 0 | 1.074 |

Table 3(cont'd). Production facts for 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B3124-4 | USDA | 268 | 100 | 44 | 16 | 47 | 38 | 0 | 0 | 0 | 38 | 0 | 1.063 |
| B3137-3 | USDA | 380 | 197 | 86 | 5 | 36 | 59 | 0 | 0 | 0 | 59 | 0 | 1.060 |
| NC399-1 | USDA | 352 | 190 | 83 | 6 | 31 | 63 | 0 | 0 | 0 | 63 | 0 | 1.066 |
| NC426-2 | USDA | 333 | 211 | 92 | 5 | 25 | 70 | 0 | 0 | 0 | 70 | 0 | 1.072 |
| NC429-1 | USDA | 283 | 95 | 41 | 10 | 53 | 37 | 0 | 0 | 0 | 37 | 0 | 1.074 |
| B3075-2 | USDA | 247 | 96 | 42 | 12 | 44 | 44 | 0 | 0 | 0 | 44 | 0 | 1.059 |
| B3080-1 | USDA | 269 | 82 | 36 | 14 | 52 | 34 | 0 | 0 | 0 | 34 | 0 | 1.058 |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 4. Plant growth and tuber characteristics of 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Atlantic | 100 | 7 | 8-9 | 2 | 2 | 6 | 5 | 3 | 6 | 7 | |
| Elkton | 100 | 7 | 5-8 | 2 | 1 | 6 | 5 | 3 | 6 | 7 | |
| Fabula | 46 | 7 | 7-8 | 2 | 4 | 9 | 6 | 4 | 5 | 6 | |
| Goldrush | 100 | 5 | 8-9 | 2 | 1 | 4 | 3 | 5 | 7 | 4 | |
| Harley Blackwell | 100 | 7 | 8-5 | 2 | 1 | 6 | 5 | 3 | 5 | 7 | uniform |
| LaChipper | 100 | 6 | 8-9 | 1 | 1 | 8 | 7 | 3 | 4 | 6 | |
| Peter Wilcox | 100 | 6 | 5-8 | 1 | 5 | 1 | 6 | 3 | 6 | 8 | |
| Red LaSoda | 100 | 6 | 8-5 | 2 | 1 | 2 | 7 | 3 | 3 | 7 | |
| Satina | 100 | 6 | 7-5 | 2 | 5 | 9 | 6 | 3 | 6 | 8 | |
| Snowden | 100 | 6 | 8 | 2 | 1 | 6 | 5 | 3 | 4 | 7 | |
| Yukon Gold | 100 | 6 | 8 | 1 | 5 | 9 | 6 | 3 | 6 | 5 | |
| B2996-1 | 100 | 7 | 9 | 1 | 1 | 6 | 5 | 3 | 6 | 4 | lenticels |
| B3005-9 | 100 | 5 | 8-5 | 2 | 1 | 8 | 6 | 3 | 8 | 4 | lenticels |
| B3010-2 | 100 | 6 | 8-9 | 1 | 1 | 6 | 5 | 3 | 6 | 6 | |
| B3012-3 | 100 | 7 | 8-5 | 2 | 1 | 6 | 5 | 3 | 5 | 5 | |
| B3034-9 | 100 | 6 | 8 | 1 | 1 | 2 | 5 | 3 | 5 | 7 | |
| BNC363-3 | 92 | 6 | 8-5 | 2 | 1 | 7 | 5 | 3 | 5 | 5 | |
| B2942-6 | 100 | 7 | 8-5 | 1 | 1 | 2 | 6 | 3 | 5 | 6 | |
| BNC318-6 | 100 | 6 | 8 | 1 | 1 | 6 | 5 | 3 | 6 | 7 | |
| B2833-8 | 100 | 6 | 9 | 1 | 1 | 8 | 5 | 3 | 5 | 4 | lenticels |

Table 4 (cont'd). Plant growth and tuber characteristics of 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| B3082-2 | 100 | 7 | 9 | 2 | 2 | 7 | 6 | 3 | 5 | 5 | |
| B3082-22 | 100 | 6 | 9-6 | 2 | 1 | 8 | 5 | 3 | 5 | 5 | |
| B3083-4 | 100 | 6 | 6 | 3 | 1 | 8 | 6 | 3 | 6 | 7 | |
| B3083-6 | 100 | 8 | 6 | 2 | 1 | 7 | 5 | 3 | 7 | 7 | |
| B3083-8 | 100 | 8 | 5-9 | 1 | 1 | 8 | 6 | 3 | 5 | 7 | |
| B3083-9 | 100 | 6 | 5-6 | 2 | 1 | 8 | 6 | 3 | 6 | 4 | lite purple eyes |
| B3083-11 | 100 | 7 | 5-9 | 2 | 2 | 7 | 5 | 3 | 6 | 7 | purple eyes |
| B3083-13 | 100 | 6 | 8-9 | 2 | 2 | 7 | 6 | 3 | 6 | 6 | |
| B3084-3 | 100 | 6 | 9 | 2 | 2 | 8 | 6 | 3 | 5 | 5 | |
| B3085-3 | 100 | 7 | 5-9 | 2 | 1 | 6 | 5 | 3 | 4 | 5 | |
| B3091-4 | 100 | 8 | 5-8 | 2 | 2 | 7 | 6 | 3 | 5 | 5 | |
| B3097-7 | 100 | 8 | 8-5 | 2 | 1 | 8 | 6 | 2 | 6 | 8 | |
| B3100-1 | 100 | 7 | 8-5 | 3 | - | - | - | - | - | - | |
| B3100-6 | 100 | 6 | 8-5 | 2 | 2 | 7 | 5 | 3 | 6 | 5 | |
| B3100-7 | 100 | 7 | 5-8 | 2 | 2 | 6 | 5 | 3 | 4 | 4 | pointy |
| B3100-10 | 100 | 6 | 5-8 | 2 | 2 | 7 | 5 | 3 | 5 | 4 | |
| B3101-1 | 100 | 7 | 9 | 2 | 1 | 8 | 6 | 2 | 6 | 4 | lenticels |
| B3103-1 | 100 | 7 | 8 | 2 | 5 | 9 | 6 | 2 | 7 | 5 | |
| B3107-2 | 100 | 6 | 8 | 2 | 1 | 7 | 5 | 3 | 6 | 5 | |
| B3107-4 | 100 | 7 | 8-5 | 1 | 1 | 6 | 5 | 4 | 6 | 5 | |

Table 4 (cont'd). Plant growth and tuber characteristics of 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| B3124-4 | 100 | 8 | 5-6 | 1 | 1 | 1 | 5 | 3 | 5 | 6 | |
| B3137-3 | 100 | 7 | 6-9 | 1 | 2 | 2 | 6 | 3 | 4 | 5 | |
| NC399-1 | 100 | 6 | 5-8 | 2 | 1 | 6 | 5 | 3 | 4 | 4 | lenticels |
| NC426-2 | 100 | 7 | 9 | 2 | 2 | 9 | 5 | 3 | 7 | 8 | |
| NC429-1 | 100 | 7 | 5-8 | 1 | 7 | 2 | 6 | 3 | 6 | 5 | |
| B3075-2 | 100 | 7 | 8-9 | 1 | 1 | 8-2 | 6 | 3 | 6 | 4 | |
| B3080-1 | 100 | 6 | 4-8 | 1 | 1 | 1 | 6 | 3 | 5 | 5 | |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 5. External and internal defects of 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 3 | 0 | 4 | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elkton | 0 | 2 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fabula | 3 | 3 | 0 | 10 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Goldrush | 0 | 3 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LaChipper | 0 | 0 | 1 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peter Wilcox | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red LaSoda | 0 | 3 | 2 | 5 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Satina | 0 | 8 | 0 | 1 | 9 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| Snowden | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yukon Gold | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 20 | 5 | 5 |
| B2996-1 | 0 | 1 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 30 | 0 | 15 |
| B3005-9 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3010-2 | 0 | 1 | 0 | 10 | 11 | 0 | 0 | 0 | 5 | 5 | 5 | 5 |
| B3012-3 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 10 | 5 | 10 | 0 |
| B3034-9 | 0 | 2 | 0 | 7 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC363-3 | 0 | 0 | 0 | 4 | 4 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2942-6 | 0 | 2 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC318-6 | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2833-8 | 0 | 2 | 2 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 5(cont'd). External and internal defects of 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| B3082-2 | 1 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3082-22 | 0 | 1 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3083-4 | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3083-6 | 0 | 7 | 0 | 1 | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3083-8 | 0 | 7 | 1 | 2 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3083-9 | 1 | 1 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3083-11 | 1 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3083-13 | 0 | 1 | 2 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3084-3 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3085-3 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3091-4 | 3 | 6 | 0 | 1 | 10 | 5 | 0 | 0 | 5 | 15 | 0 | 0 |
| B3097-7 | 0 | 4 | 0 | 1 | 5 | 5 | 0 | 0 | 0 | 5 | 0 | 0 |
| B3100-1 | 0 | 1 | 0 | 1 | 3 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3100-6 | 2 | 3 | 0 | 6 | 10 | 5 | 0 | 0 | 80 | 0 | 0 | 0 |
| B3100-7 | 0 | 3 | 1 | 1 | 5 | 0 | 0 | 0 | 45 | 0 | 0 | 0 |
| B3100-10 | 0 | 4 | 1 | 2 | 7 | 0 | 0 | 0 | 15 | 0 | 0 | 0 |
| B3101-1 | 0 | 5 | 0 | 5 | 11 | 25 | 0 | 0 | 15 | 10 | 15 | 25 |
| B3103-1 | 3 | 5 | 1 | 4 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| B3107-2 | 0 | 2 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3107-4 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 5(cont'd). External and internal defects of 2014 USDA 2nd Year Potato Variety Trial in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| B3124-4 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3137-3 | 0 | 3 | 0 | 10 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC399-1 | 2 | 1 | 2 | 10 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| NC426-2 | 1 | 2 | 0 | 7 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC429-1 | 0 | 7 | 0 | 2 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3075-2 | 0 | 2 | 0 | 11 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3080-1 | 2 | 2 | 0 | 7 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 3. USDA 3rd YEAR VARIETY TRIAL, 2014

### *General Comments*

A goal of the 3rd year USDA trial is to continue evaluating new clones for production potential in Florida. The entries in this trial were selected from the 2nd year clone trial conducted in 2013.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 4, 2014 |
| Vine Kill Dates | na |
| Harvest Date | May 30, 2014 |
| Season Length | 115 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 14 (Standard: Atlantic) |
| Number of Clones | 20 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 1 |
| Plot Size | 16 ft (4.9 m) |

***Production Facts***

| | |
|---|---|
| Early Vigor Ratings | 43 DAP |
| Highest Total Yield | B3042-2 (406 cwt/acre or 45.4 T/ha) |
| Highest Marketable Yield | Snowden (307 cwt/acre or 34.4 T/ha) |
| Best Appearance Rating | Belmondo, Elkton, Peter Wilcox, Yukon Gold,<br>BNC322-2, BNC371-1 (8, very good) |

Table 6. Production facts for 2014 USDA 3rd Year Potato Variety Trial in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | MFX | 297 | 230 | 100 | 4 | 18 | 75 | 4 | 0 | 0 | 79 | 4 | 1.076 |
| Belmondo | Hanse | 398 | 196 | 85 | 5 | 45 | 49 | 0 | 0 | 0 | 49 | 0 | 1.068 |
| Chippewa | USDA | 274 | 121 | 52 | 8 | 47 | 45 | 0 | 0 | 0 | 45 | 0 | 1.059 |
| Elkton | USDA | 369 | 242 | 105 | 5 | 30 | 66 | 0 | 0 | 0 | 66 | 0 | 1.076 |
| Fabula | MFX | 293 | 241 | 105 | 1 | 15 | 70 | 14 | 0 | 0 | 84 | 14 | 1.054 |
| Goldrush | MFX | 256 | 156 | 68 | 7 | 29 | 50 | 13 | 0 | 0 | 64 | 13 | 1.050 |
| Harley Blackwell | MFX | 316 | 177 | 77 | 5 | 38 | 56 | 0 | 0 | 0 | 56 | 0 | 1.070 |
| LaChipper | MFX | 248 | 135 | 59 | 8 | 31 | 61 | 0 | 0 | 0 | 61 | 0 | 1.058 |
| Peter Wilcox | MFX | 263 | 127 | 55 | 7 | 43 | 50 | 0 | 0 | 0 | 50 | 0 | 1.078 |
| Peter Wilcox | USDA | 134 | 16 | 7 | 10 | 78 | 12 | 0 | 0 | 0 | 12 | 0 | 1.061 |
| Red LaSoda | MFX | 243 | 171 | 74 | 5 | 21 | 73 | 0 | 0 | 0 | 73 | 0 | 1.060 |
| Satina | MFX | 292 | 172 | 75 | 4 | 20 | 73 | 3 | 0 | 0 | 77 | 3 | 1.058 |
| Snowden | MFX | 374 | 307 | 133 | 2 | 16 | 69 | 10 | 3 | 0 | 82 | 13 | 1.073 |
| Yukon Gold | MFX | 320 | 225 | 98 | 5 | 23 | 64 | 1 | 7 | 0 | 72 | 8 | 1.077 |
| B2950-3 | USDA | 339 | 105 | 46 | 11 | 58 | 31 | 0 | 0 | 0 | 31 | 0 | 1.070 |
| B2951-5 | USDA | 320 | 140 | 61 | 8 | 47 | 44 | 0 | 0 | 0 | 44 | 0 | 1.078 |
| B2951-7 | USDA | 316 | 154 | 67 | 9 | 40 | 50 | 1 | 0 | 0 | 51 | 1 | 1.074 |
| B2993-1 | USDA | 291 | 186 | 81 | 3 | 27 | 70 | 0 | 0 | 0 | 70 | 0 | 1.067 |
| B3005-3 | USDA | 225 | 56 | 24 | 12 | 62 | 25 | 0 | 0 | 0 | 25 | 0 | 1.070 |
| B3005-6 | USDA | 234 | 188 | 82 | 3 | 15 | 82 | 0 | 0 | 0 | 82 | 0 | 1.069 |

Table 6 (cont'd). Production facts for 2014 USDA 3rd Year Potato Variety Trial in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | Size Class Range (%) A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B3005-7 | USDA | 298 | 124 | 54 | 7 | 50 | 43 | 0 | 0 | 0 | 43 | 0 | 1.079 |
| B3012-4 | USDA | 250 | 112 | 48 | 7 | 48 | 46 | 0 | 0 | 0 | 46 | 0 | 1.061 |
| B3013-1 | USDA | 251 | 77 | 34 | 17 | 52 | 31 | 0 | 0 | 0 | 31 | 0 | 1.073 |
| B3032-6 | USDA | 277 | 91 | 39 | 13 | 54 | 33 | 0 | 0 | 0 | 33 | 0 | 1.074 |
| B3034-7 | USDA | 263 | 156 | 68 | 11 | 29 | 59 | 0 | 0 | 0 | 59 | 0 | 1.056 |
| B3042-1 | USDA | 352 | 181 | 79 | 5 | 42 | 53 | 0 | 0 | 0 | 53 | 0 | 1.082 |
| B3042-2 | USDA | 406 | 291 | 126 | 3 | 22 | 75 | 0 | 0 | 0 | 75 | 0 | 1.063 |
| B3044-2 | USDA | 270 | 61 | 26 | 18 | 59 | 23 | 0 | 0 | 0 | 23 | 0 | 1.081 |
| BNC314-5 | USDA | 262 | 132 | 57 | 10 | 39 | 51 | 0 | 0 | 0 | 51 | 0 | 1.061 |
| BNC322-1 | USDA | 292 | 193 | 84 | 6 | 27 | 67 | 0 | 0 | 0 | 67 | 0 | 1.055 |
| BNC322-2 | USDA | 297 | 212 | 92 | 4 | 24 | 70 | 3 | 0 | 0 | 72 | 3 | 1.050 |
| BNC323-1 | USDA | 263 | 116 | 50 | 8 | 47 | 45 | 0 | 0 | 0 | 45 | 0 | 1.057 |
| BNC371-1 | USDA | 290 | 200 | 87 | 6 | 25 | 64 | 5 | 0 | 0 | 69 | 5 | 1.075 |
| BNC372-3 | USDA | 288 | 163 | 71 | 4 | 39 | 57 | 0 | 0 | 0 | 57 | 0 | 1.063 |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 7. Plant growth and tuber characteristics of 2014 USDA 3rd Year Potato Variety Trial in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Atlantic | 100 | 7 | 8-9 | 2 | 2 | 6 | 5 | 3 | 6 | 7 | |
| Belmondo | 100 | 6 | 8-9 | 1 | 5 | 9 | 6 | 3 | 6 | 8 | |
| Chippewa | 100 | 6 | 8-9 | 2 | 1 | 8 | 7 | 4 | 5 | 7 | |
| Elkton | 100 | 6 | 5-8 | 2 | 2 | 6 | 6 | 3 | 7 | 8 | |
| Fabula | 100 | 6 | 7-8 | 2 | 3 | 9 | 6 | 4 | 5 | 7 | |
| Goldrush | 100 | 6 | 8 | 1 | 1 | 5 | 3 | 6 | 7 | 7 | |
| Harley Blackwell | 100 | 7 | 8 | 2 | 1 | 7 | 5 | 2 | 6 | 7 | |
| LaChipper | 100 | 7 | 8-9 | 1 | 1 | 8 | 7 | 3 | 5 | 5 | |
| Peter Wilcox | 100 | 6 | 5-8 | 1 | 5 | 1 | 5 | 3 | 4 | 8 | |
| Peter Wilcox | 100 | 7 | 8-5 | 1 | 5 | 1 | 6 | 3 | 5 | 7 | |
| Red LaSoda | 100 | 7 | 6-9 | 1 | 1 | 2 | 7 | 3 | 3 | 7 | |
| Satina | 100 | 6 | 8-5 | 1 | 5 | 9 | 6 | 3 | 6 | 6 | |
| Snowden | 100 | 7 | 9 | 2 | 2 | 6 | 5 | 2 | 4 | 5 | |
| Yukon Gold | 100 | 7 | 8-5 | 1 | 4 | 9 | 7 | 3 | 7 | 8 | |
| B2950-3 | 100 | 7 | 9-6 | 2 | 1 | 6 | 5 | 3 | 5 | 7 | |
| B2951-5 | 100 | 6 | 8-9 | 2 | 2 | 8 | 7 | 3 | 6 | 6 | |
| B2951-7 | 100 | 8 | 9-6 | 1 | 1 | 7 | 5 | 3 | 6 | 5 | |
| B2993-1 | 100 | 6 | 5-6 | 1 | 1 | 1 | 7 | 3 | 7 | 5 | |
| B3005-3 | 100 | 6 | 8 | 1 | 1 | 8 | 6 | 3 | 6 | 5 | |
| B3005-6 | 100 | 6 | 8-9 | 2 | 2 | 6 | 5 | 2 | 6 | 7 | |

Table 7 (cont'd). Plant growth and tuber characteristics of 2014 USDA 3rd Year Potato Variety Trial in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| B3005-7 | 100 | 5 | 8-5 | 1 | 1 | 6 | 5 | 3 | 5 | 5 | |
| B3012-4 | 100 | 8 | 8-5 | 1 | 1 | 8 | 6 | 3 | 7 | 5 | |
| B3013-1 | 100 | 6 | 9 | 1 | 1 | 6 | 6 | 3 | 6 | 4 | lenticels |
| B3032-6 | 100 | 6 | 5-8 | 2 | 5 | 9 | 7 | 3 | 5 | 7 | red eyes |
| B3034-7 | 100 | 6 | 5-8 | 1 | 1 | 2 | 6 | 3 | 5 | 4 | mis shapes |
| B3042-1 | 100 | 6 | 5-8 | 2 | 4 | 7 | 6 | 4 | 6 | 4 | mis shapes |
| B3042-2 | 100 | 6 | 5-9 | 2 | 2 | 8 | 6 | 3 | 6 | 6 | red eyes |
| B3044-2 | 100 | 7 | 8-9 | 2 | 4 | 9 | 6 | 3 | 5 | 5 | purple eyes |
| BNC314-5 | 100 | 6 | 8 | 1 | 4 | 2 | 6 | 3 | 5 | 5 | |
| BNC322-1 | 100 | 6 | 8-9 | 2 | 1 | 2 | 7 | 3 | 3 | 5 | lenticels |
| BNC322-2 | 100 | 5 | 8-5 | 2 | 1 | 2 | 6 | 3 | 6 | 8 | |
| BNC323-1 | 100 | 7 | 8 | 1 | 2 | 2 | 7 | 3 | 6 | 5 | |
| BNC371-1 | 100 | 5 | 8-9 | 2 | 1 | 8 | 7 | 3 | 6 | 8 | |
| BNC372-3 | 100 | 6 | 5-6 | 1 | 1 | 8 | 6 | 3 | 6 | 5 | |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 8. External and internal defects of 2014 USDA 3rd Year Potato Variety Trial in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 10 | 5 | 5 | 5 |
| Belmondo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chippewa | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elkton | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fabula | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Goldrush | 0 | 1 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LaChipper | 0 | 4 | 0 | 8 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peter Wilcox | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peter Wilcox | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red LaSoda | 0 | 1 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Satina | 0 | 0 | 1 | 22 | 23 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| Snowden | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yukon Gold | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2950-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2951-5 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2951-7 | 0 | 1 | 0 | 4 | 5 | 0 | 0 | 0 | 5 | 5 | 0 | 0 |
| B2993-1 | 0 | 1 | 1 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3005-3 | 0 | 0 | 1 | 1 | 2 | 5 | 0 | 0 | 0 | 15 | 0 | 5 |
| B3005-6 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 8 (cont'd). External and internal defects of 2014 USDA 3rd Year Potato Variety Trial in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| B3005-7 | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3012-4 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 10 | 5 | 0 |
| B3013-1 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3032-6 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3034-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3042-1 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3042-2 | 0 | 4 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3044-2 | 0 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC314-5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC322-1 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC322-2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC323-1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC371-1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC372-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 4. FRESH MARKET POTATO VARIETY TRIAL, 2014

### *General Comments*

A goal of the fresh market variety trial is to identify a round white potato that has better quality and production characteristics than the "standard" LaChipper, and promising new russet varieties. Identification of "specialty" potatoes that expand the varieties produced in Florida is also a priority. Established varieties were included to provide a baseline for comparison with the numbered clones.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 14, 2014 |
| Vine Kill Dates | May 12, 2014 |
| Harvest Dates | June 3, 2014 |
| Season Length | 87 days planting to vine kill; 109 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 22 (Standard: LaChipper) |
| Number of Clones | 8 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 4 |
| Plot Size | 16 ft (4.9 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 35 DAP |
| Highest Total Yield | Satina (422 cwt/acre or 47.2 T/ha) |
| Highest Marketable Yield | Satina (276 cwt/acre or 30.9 T/ha) |
| Best Appearance Rating | Anuschka, Jelly, Marietta, Natascha, B2893-2 (8.0, very good) |

Table 9. Production statistics for the 2014 Fresh Market Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LaChipper | MFX | 267 | 145 | 100 | 6 | 21 | 69 | 2 | 2 | 0 | 73 | 4 | 1.064 |
| Adora | MFX | 242 | 127 | 88 | 5 | 36 | 59 | 0 | 0 | 0 | 59 | 0 | 1.051 |
| Amarillo Moon | Sun Rain | 267 | 65 | 45 | 13 | 62 | 25 | 0 | 0 | 0 | 25 | 0 | 1.075 |
| Anuschka | Sun Rain | 263 | 100 | 69 | 7 | 49 | 44 | 0 | 0 | 0 | 44 | 0 | 1.057 |
| Anuschka | Seed Pro Inc. | 296 | 154 | 106 | 5 | 32 | 61 | 1 | 0 | 0 | 63 | 1 | 1.058 |
| C322 | Sun Rain | 384 | 148 | 102 | 7 | 48 | 44 | 2 | 0 | 0 | 46 | 2 | 1.055 |
| Sebago | Grower | 327 | 185 | 128 | 4 | 31 | 61 | 2 | 2 | 0 | 65 | 4 | 1.060 |
| Electra | REAL | 391 | 201 | 139 | 4 | 31 | 62 | 2 | 1 | 0 | 65 | 3 | 1.056 |
| Elfe | Sun Rain | 309 | 128 | 88 | 6 | 46 | 48 | 1 | 0 | 0 | 48 | 1 | 1.062 |
| Fabula | MFX | 324 | 183 | 126 | 3 | 18 | 71 | 7 | 1 | 0 | 79 | 8 | 1.053 |
| French Fingerling | MFX | 170 | 30 | 21 | 35 | 58 | 21 | 0 | 0 | 0 | 21 | 0 | 1.059 |
| Goldrush | MFX | 277 | 145 | 100 | 6 | 36 | 53 | 3 | 1 | 0 | 58 | 5 | 1.055 |
| Jelly | Sun Rain | 348 | 177 | 122 | 5 | 39 | 54 | 2 | 0 | 0 | 56 | 2 | 1.059 |
| Katahdin | USDA | 293 | 166 | 115 | 4 | 31 | 63 | 1 | 1 | 0 | 66 | 2 | 1.067 |
| Kennebec | USDA | 342 | 184 | 127 | 3 | 34 | 60 | 2 | 1 | 0 | 63 | 2 | 1.066 |
| Mariette | Sun Rain | 305 | 116 | 80 | 10 | 48 | 41 | 0 | 0 | 0 | 41 | 0 | 1.056 |
| Natascha | Hanse Seed | 248 | 97 | 67 | 8 | 50 | 42 | 0 | 0 | 0 | 42 | 0 | 1.056 |
| Regina | Sun Rain | 265 | 88 | 61 | 12 | 50 | 37 | 0 | 0 | 0 | 37 | 0 | 1.051 |
| Satina | MFX | 422 | 276 | 191 | 2 | 15 | 68 | 11 | 4 | 0 | 83 | 15 | 1.059 |
| Satina | Hanse Seed | 363 | 230 | 159 | 3 | 23 | 67 | 3 | 3 | 0 | 74 | 6 | 1.058 |

Table 9 (cont'd). Production statistics for the 2014 Fresh Market Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toscana | Hanse Seed | 330 | 158 | 109 | 10 | 39 | 48 | 3 | 0 | 0 | 52 | 3 | 1.054 |
| Yukon Gold | MFX | 271 | 145 | 100 | 4 | 26 | 61 | 7 | 2 | 0 | 70 | 9 | 1.063 |
| B2872-16 | USDA | 359 | 246 | 170 | 3 | 16 | 68 | 8 | 5 | 0 | 81 | 13 | 1.058 |
| B2876-7 | USDA | 247 | 147 | 101 | 4 | 30 | 65 | 1 | 0 | 0 | 66 | 1 | 1.063 |
| B2890-11 | USDA | 260 | 144 | 99 | 5 | 25 | 65 | 5 | 0 | 0 | 70 | 5 | 1.058 |
| B2893-2 | USDA | 336 | 192 | 132 | 5 | 36 | 58 | 1 | 0 | 0 | 59 | 1 | 1.071 |
| B2950-3 | USDA | 273 | 95 | 66 | 12 | 51 | 37 | 0 | 0 | 0 | 37 | 0 | 1.069 |
| B2967-5 | USDA | 384 | 273 | 188 | 4 | 22 | 67 | 5 | 2 | 0 | 74 | 7 | 1.066 |
| BNC318-6 | USDA | 341 | 244 | 168 | 3 | 19 | 72 | 4 | 2 | 0 | 78 | 6 | 1.060 |
| BNC326-14 | USDA | 251 | 121 | 84 | 6 | 29 | 63 | 1 | 1 | 0 | 65 | 2 | 1.061 |
| *MSD*[3] | | 49 | 55 | | 5 | 12 | 3 | 4 | 2 | - | 13 | 5 | 0.0056 |
| *P Value* | | *0.0001* | *0.0001* | | *0.0001* | *0.0001* | *0.0001* | *0.0090* | *0.0090* | - | *0.0001* | *0.0001* | *0.0020* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 10. Plant growth and tuber characteristics of the Fresh Market Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| LaChipper | 100 | 6 | 6 | 3 | 1 | 8 | 6 | 3 | 5 | 6 | |
| Adora | 96 | 6 | 5 | 2 | 2 | 9 | 6 | 3 | 5 | 6 | |
| Amarillo Moon | 100 | 7 | 5-8 | 4 | 4 | 7 | 6 | 3 | 4 | 6 | |
| Anuschka | 100 | 6 | 5 | 3 | 5 | 9 | 6 | 3 | 7 | 8 | |
| Anuschka | 100 | 6 | 5 | 3 | 4 | 9 | 6 | 3 | 7 | 8 | |
| C322 | 100 | 6 | 5 | 3 | 3 | 8 | 7 | 4 | 6 | 5 | |
| Sebago | 100 | 7 | 5-6 | 3 | 1 | 8 | 6 | 3 | 5 | 6 | |
| Electra | 100 | 6 | 5-8 | 4 | 4 | 9 | 6 | 3 | 7 | 6 | |
| Elfe | 100 | 6 | 6 | 3 | 5 | 9 | 7 | 3 | 6 | 7 | |
| Fabula | 100 | 5 | 5 | 3 | 2 | 9 | 7 | 3 | 5 | 7 | |
| French Fingerling | 100 | 6 | 5-8 | 3 | 3 | 3 | 7 | cresent | 6 | 4 | |
| Goldrush | 100 | 6 | 9-6 | 3 | 1 | 5 | 3 | 6 | 7 | 7 | |
| Jelly | 100 | 6 | 5 | 3 | 5 | 9 | 6 | 3 | 7 | 8 | |
| Katahdin | 100 | 6 | 5 | 3 | 1 | 7 | 6 | 3 | 6 | 6 | corky ringspot |
| Kennebec | 100 | 6 | 9-6 | 4 | 1 | 8 | 7 | 3 | 5 | 5 | |
| Mariette | 100 | 6 | 6 | 3 | 4 | 9 | 7 | 3 | 6 | 8 | pretty |
| Natascha | 100 | 7 | 5 | 3 | 5 | 9 | 6 | 3 | 6 | 8 | pretty |
| Regina | 93 | 7 | 5 | 3 | 3 | 9 | 6 | 3 | 5 | 6 | |
| Satina | 100 | 7 | 8-5 | 3 | 4 | 9 | 6 | 3 | 5 | 7 | |
| Satina | 100 | 7 | 5 | 4 | 4 | 9 | 6 | 3 | 5 | 6 | |

Table 10 (cont'd). Plant growth and tuber characteristics of the Fresh Market Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Toscana | 100 | 7 | 6 | 3 | 5 | 9 | 7 | 3 | 7 | 6 | corky ringspot |
| Yukon Gold | 100 | 6 | 8 | 3 | 5 | 7 | 6 | 3 | 6 | 5 | |
| B2872-16 | 100 | 6 | 5-8 | 4 | 1 | 8 | 6 | 3 | 4 | 5 | |
| B2876-7 | 100 | 6 | 5 | 2 | 1 | 8 | 6 | 3 | 7 | 7 | corky ringspot, Okay |
| B2890-11 | 100 | 7 | 5 | 2 | 4 | 9 | 6 | 3 | 6 | 6 | |
| B2893-2 | 100 | 6 | 5 | 3 | 1 | 8 | 6 | 3 | 6 | 8 | nice |
| B2950-3 | 100 | 7 | 6 | 3 | 1 | 6 | 5 | 3 | 6 | 7 | |
| B2967-5 | 100 | 6 | 5-8 | 4 | 2 | 6 | 5 | 3 | 6 | 5 | |
| BNC318-6 | 100 | 6 | 6-9 | 3 | 2 | 6 | 5 | 3 | 5 | 5 | |
| BNC326-14 | 100 | 5 | 8-5 | 3 | 2 | 7 | 6 | 3 | 6 | 4 | ugly |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 11. External and internal defects of the Fresh Market Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| LaChipper | 0 | 3 | 0 | 22 | 25 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Adora | 1 | 3 | 0 | 10 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Amarillo Moon | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Anuschka | 0 | 1 | 0 | 12 | 13 | 1 | 0 | 9 | 0 | 0 | 0 | 0 |
| Anuschka | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| C322 | 0 | 4 | 0 | 11 | 16 | 0 | 0 | 3 | 0 | 1 | 0 | 0 |
| Sebago | 0 | 3 | 1 | 8 | 13 | 0 | 0 | 9 | 0 | 1 | 0 | 0 |
| Electra | 0 | 2 | 0 | 16 | 19 | 0 | 0 | 3 | 0 | 3 | 0 | 0 |
| Elfe | 0 | 0 | 0 | 17 | 17 | 0 | 0 | 10 | 0 | 1 | 0 | 0 |
| Fabula | 4 | 1 | 0 | 25 | 30 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| French Fingerling | 2 | 6 | 0 | 4 | 13 | 0 | 0 | 4 | 15 | 5 | 1 | 0 |
| Goldrush | 0 | 4 | 0 | 7 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Jelly | 0 | 2 | 0 | 10 | 11 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Katahdin | 0 | 1 | 0 | 12 | 13 | 0 | 0 | 4 | 0 | 1 | 0 | 0 |
| Kennebec | 1 | 6 | 0 | 8 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mariette | 0 | 1 | 0 | 7 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Natascha | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Regina | 0 | 2 | 0 | 9 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Satina | 0 | 2 | 0 | 19 | 21 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Satina | 0 | 2 | 0 | 13 | 15 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

Table 11 (cont'd). External and internal defects of the Fresh Market Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Toscana | 0 | 2 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yukon Gold | 0 | 4 | 1 | 20 | 24 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| B2872-16 | 1 | 4 | 1 | 10 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2876-7 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 3 | 0 | 0 | 1 | 0 |
| B2890-11 | 1 | 2 | 0 | 18 | 21 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| B2893-2 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2950-3 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 15 | 0 | 0 | 0 | 0 |
| B2967-5 | 0 | 2 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC318-6 | 1 | 0 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC326-14 | 1 | 4 | 0 | 21 | 26 | 1 | 0 | 3 | 1 | 1 | 0 | 0 |
| *MSD*[3] | 2 | 4 | 1 | 9 | 9 | 2 | - | 22 | 3 | - | - | - |
| *P Value* | *0.0008* | *0.0048* | *0.0140* | *0.0001* | *0.0001* | *0.0490* | *0.5200* | *0.0001* | *0.0001* | *0.1000* | *0.5700* | *0.0800* |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 5. RED AND PURPLE POTATO VARIETY TRIAL, 2014

***General Comments***

A goal of the red/purple-skinned Fresh Market Potato Variety trial is to identify a red or purple potato that has better quality and production characteristics than the "standard" Red LaSoda. Identification of "specialty" potatoes that expand the varieties produced in Florida is also a priority. Established varieties were included to provide a baseline for comparison with the numbered clones.

## Planting Information

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 5, 2014 |
| Vine Kill Dates | May 5, 2014 |
| Harvest Date | May 19, 2014 |
| Season Length | 90 days planting to vine kill; 103 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 7 (Standard: Red LaSoda) |
| Number of Clones | 15 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 4 |
| Plot Size | 16 ft (4.9 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 43 DAP |
| Highest Total Yield | BNC201-1 (339 cwt/acre or 37.9 T/ha) |
| Highest Marketable Yield | BNC316-1 (256 cwt/acre or 28.6 T/ha) |
| Best Appearance Rating | Peter Wilcox, B2928-6, BNC322-1 (7.0, good) |

Table 12. Production statistics for 2014 Red and Purple Variety Trial potato selections in Hastings, FL.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Red LaSoda | MFX | 182 | 115 | 100 | 4 | 21 | 67 | 7 | 1 | 0 | 75 | 8 | 1.049 |
| Adirondack Blue | MFX | 182 | 85 | 74 | 4 | 33 | 62 | 2 | 0 | 0 | 63 | 2 | 1.057 |
| Chieftain | USDA | 258 | 183 | 159 | 3 | 22 | 70 | 3 | 2 | 0 | 75 | 5 | 1.051 |
| Dark Red Chieftain | REAL | 195 | 111 | 96 | 7 | 31 | 59 | 3 | 0 | 0 | 62 | 3 | 1.052 |
| Dark Red Norland | USDA | 176 | 79 | 69 | 4 | 45 | 50 | 0 | 0 | 0 | 50 | 0 | 1.056 |
| French Fingerling | MFX | 134 | 5 | 4 | 50 | 47 | 3 | 0 | 0 | 0 | 3 | 0 | 1.048 |
| Peter Wilcox | USDA | 208 | 107 | 93 | 8 | 35 | 56 | 1 | 0 | 0 | 57 | 1 | 1.058 |
| B2152-17 | USDA | 163 | 41 | 35 | 20 | 53 | 27 | 0 | 0 | 0 | 27 | 0 | 1.059 |
| B2873-1 | USDA | 233 | 153 | 133 | 5 | 27 | 68 | 1 | 0 | 0 | 69 | 1 | 1.058 |
| B2928-6 | USDA | 239 | 123 | 107 | 7 | 41 | 52 | 0 | 0 | 0 | 52 | 0 | 1.057 |
| BNC201-1 | USDA | 339 | 105 | 91 | 24 | 27 | 48 | 1 | 0 | 0 | 49 | 1 | 1.056 |
| BNC304-1 | USDA | 265 | 165 | 143 | 3 | 32 | 64 | 1 | 0 | 0 | 65 | 1 | 1.057 |
| BNC306-3 | USDA | 221 | 77 | 67 | 10 | 54 | 36 | 0 | 0 | 0 | 36 | 0 | 1.059 |
| BNC314-6 | USDA | 190 | 81 | 70 | 9 | 47 | 44 | 0 | 1 | 0 | 44 | 1 | 1.057 |
| BNC314-8 | USDA | 197 | 65 | 56 | 11 | 55 | 33 | 1 | 0 | 0 | 34 | 1 | 1.057 |
| BNC316-1 | USDA | 317 | 256 | 222 | 3 | 16 | 81 | 1 | 0 | 0 | 81 | 1 | 1.049 |
| BNC320-2 | USDA | 252 | 99 | 86 | 6 | 53 | 40 | 0 | 0 | 0 | 40 | 0 | 1.061 |
| BNC314-5 | USDA | 233 | 89 | 77 | 10 | 48 | 43 | 0 | 0 | 0 | 43 | 0 | 1.053 |
| BNC322-1 | USDA | 257 | 187 | 162 | 3 | 20 | 76 | 1 | 0 | 0 | 77 | 1 | 1.047 |
| BNC322-2 | USDA | 167 | 118 | 103 | 3 | 25 | 69 | 1 | 1 | 0 | 71 | 2 | 1.047 |
| BNC323-1 | USDA | 204 | 93 | 81 | 11 | 36 | 53 | 0 | 0 | 0 | 53 | 0 | 1.047 |
| B2942-6 | USDA | 221 | 65 | 57 | 15 | 52 | 33 | 0 | 0 | 0 | 33 | 0 | 1.061 |
| *MSD*[3] | | 154 | 36 | | 12 | 14 | 14 | 8 | 3 | - | 14 | - | 0.0083 |
| *P Value* | | *0.0624* | *<0.0001* | | *<0.0001* | *<0.0001* | *<0.0001* | *0.2080* | *0.5568* | - | *<.0001* | *0.2798* | *0.0003* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 13. Plant growth and tuber characteristics of 2014 Red and Purple Variety Trial potato selections in Hastings, FL

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Red LaSoda | 60 | 6.0 | 9-6 | 4.0 | 1 | 2 | 8 | 3 | 5 | 5 | |
| Adirondack Blue | 42 | 5.5 | 5 | 4.8 | 9 | 1 | 6 | 5 | 6 | 4 | mis shapes |
| Chieftain | 79 | 5.5 | 8 | 5.3 | 1 | 2 | 6 | 3 | 4 | 5 | |
| Dark Red Chieftain | 88 | 5.5 | 8-9 | 4.8 | 1 | 2 | 7 | 2 | 6 | 6 | |
| Dark Red Norland | 69 | 6.3 | 8 | 4.5 | 1 | 2 | 7 | 2 | 5 | 6 | |
| French Fingerling | 72 | 6.8 | 7-8 | 4.3 | 4 | 3 | 8 | cresent | 6 | 4 | |
| Peter Wilcox | 66 | 5.8 | 8-5 | 4.3 | 4 | 1 | 7 | 3 | 4 | 7 | |
| B2152-17 | 94 | 5.3 | 8 | 5.0 | 3 | 2 | 7 | 2 | 5 | 6 | |
| B2873-1 | 97 | 6.8 | 9 | 3.3 | 1 | 1 | 5 | 3 | 4 | 6 | |
| B2928-6 | 98 | 5.8 | 8 | 3.8 | 4 | 1 | 6 | 3 | 5 | 7 | |
| BNC201-1 | 76 | 4.8 | 8 | 6.8 | 4 | 2 | 7 | 3 | 5 | 6 | |
| BNC304-1 | 98 | 6.0 | 8-9 | 5.5 | 1 | 2 | 7 | 3 | 6 | 5 | |
| BNC306-3 | 98 | 5.8 | 9 | 4.5 | 1 | 1 | 7 | 3 | 5 | 6 | dark purple skin |
| BNC314-6 | 89 | 5.8 | 9 | 5.0 | 1 | 1 | 8 | 3 | 6 | 5 | |
| BNC314-8 | 93 | 6.3 | 8 | 5.3 | 3 | 1 | 8 | 3 | 6 | 4 | |
| BNC316-1 | 93 | 5.8 | 8 | 6.0 | 3 | 1 | 6 | 3 | 5 | 4 | |
| BNC320-2 | 96 | 6.5 | 9-6 | 5.0 | 1 | 1 | 8 | 3 | 6 | 6 | light purple skin |
| BNC314-5 | 100 | 6.3 | 9 | 5.0 | 4 | 2 | 7 | 3 | 5 | 6 | |
| BNC322-1 | 83 | 5.3 | 8-9 | 5.8 | 1 | 2 | 7 | 3 | 4 | 7 | lenticels |
| BNC322-2 | 55 | 5.3 | 8 | 6.0 | 1 | 2 | 6 | 3 | 6 | 5 | |
| BNC323-1 | 99 | 7.0 | 8 | 5.5 | 1 | 2 | 7 | 3 | 7 | 5 | |
| B2942-6 | 98 | 6.3 | 8 | 4.3 | 2 | 2 | 6 | 3 | 6 | 4 | |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 14. External and internal defects of 2014 Red and Purple Variety Trial potato selections in Hastings, FL.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Red LaSoda | 0 | 1 | 0 | 12 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adirondack Blue | 0 | 23 | 0 | 2 | 25 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chieftain | 0 | 1 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark Red Chieftain | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark Red Norland | 0 | 1 | 0 | 6 | 7 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| French Fingerling | 1 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 25 | 0 | 0 | 0 |
| Peter Wilcox | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2152-17 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2873-1 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| B2928-6 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BNC201-1 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| BNC304-1 | 0 | 0 | 0 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC306-3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC314-6 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC314-8 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC316-1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC320-2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC314-5 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 3 | 1 | 0 |
| BNC322-1 | 2 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC322-2 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 6 | 1 | 0 |
| BNC323-1 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2942-6 | 0 | 1 | 0 | 9 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *MSD*[3] | - | 5 | - | 6 | 8 | - | - | - | 10 | 4 | - | - |
| *P Value* | *0.4026* | *<.0001* | *0.5858* | *0.0002* | *<.0001* | *0.4930* | *-* | *-* | *0.0012* | *0.0357* | *0.5630* | *0.3177* |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 6. UNIV. OF MAINE ADVANCED-LINE TRIAL, 2014

### *General Comments*

A goal of the University of Maine advanced line potato variety trial is to continue gathering data on these advanced potato selections for potential Florida production. The chipping "standard" Atlantic was included to provide a baseline for comparison with the numbered clones.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 19, 2014 |
| Vine Kill Dates | May 23, 2014 |
| Harvest Dates | June 18, 2014 |
| Season Length | 93 days planting to vine kill; 119 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 6 (Standard: Atlantic) |
| Number of Clones | 36 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 4 |
| Plot Size | 16 ft (4.9 m) |

***Production Statistics- Based over all sites***

| | |
|---|---|
| Early Vigor Ratings | 41 DAP |
| Highest Total Yield | AF4702-02 (405 cwt or 45.3 T/ha) |
| Highest Marketable Yield | AF4702-02 (309 cwt or 34.6 T/ha) |

Table 15. Production statistics for the University of Maine Advance Line Variety Trial potato selections in 2014.

| | Total | Marketable Yield[1] | | Size | | | | | | Size Class | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yield | | % of | Distribution by Class (%)[2] | | | | | | Range (%) | | Specific |
| Clone | (cwt/A) | (cwt/A) | standard | C | B | A1 | A2 | A3 | A4 | A1 to A3 | A2 to A3 | Gravity |
| Atlantic | 267 | 222 | 100 | 1 | 10 | 75 | 9 | 5 | 0 | 89 | 14 | 1.077 |
| Elkton | 305 | 232 | 104 | 2 | 14 | 67 | 10 | 7 | 0 | 84 | 17 | 1.063 |
| Goldrush | 274 | 184 | 83 | 2 | 27 | 65 | 3 | 3 | 0 | 72 | 7 | 1.056 |
| H. Blackwell | 336 | 263 | 118 | 2 | 14 | 72 | 8 | 4 | 0 | 84 | 12 | 1.069 |
| Marcy | 348 | 270 | 122 | 2 | 13 | 76 | 6 | 3 | 0 | 85 | 9 | 1.062 |
| Snowden | 318 | 261 | 117 | 1 | 15 | 79 | 4 | 1 | 0 | 84 | 5 | 1.069 |
| AF0338-17 | 205 | 144 | 65 | 3 | 19 | 74 | 3 | 0 | 0 | 78 | 3 | 1.074 |
| AF4138-8 | 162 | 101 | 45 | 7 | 28 | 61 | 3 | 1 | 0 | 65 | 4 | 1.053 |
| AF4157-6 | 298 | 222 | 100 | 2 | 19 | 76 | 3 | 0 | 0 | 80 | 3 | 1.072 |
| AF4386-16 | 332 | 214 | 96 | 3 | 22 | 67 | 5 | 2 | 0 | 74 | 7 | 1.075 |
| AF4442-4 | 183 | 114 | 51 | 2 | 7 | 69 | 14 | 8 | 0 | 91 | 22 | 1.071 |
| AF4532-8 | 17 | 8 | 4 | 29 | 30 | 41 | 0 | 0 | 0 | 41 | 0 | - |
| AF4552-5 | 316 | 278 | 125 | 2 | 8 | 69 | 12 | 9 | 0 | 90 | 21 | 1.068 |
| AF4614-2 | 299 | 191 | 86 | 3 | 15 | 75 | 4 | 4 | 0 | 83 | 7 | 1.064 |
| AF4640-1 | 284 | 203 | 91 | 2 | 15 | 71 | 8 | 3 | 0 | 83 | 12 | 1.064 |
| AF4550-2 | 79 | 44 | 20 | 9 | 33 | 58 | 0 | 0 | 0 | 58 | 0 | 1.061 |
| AF4565-1 | 45 | 15 | 7 | 13 | 51 | 32 | 3 | 0 | 0 | 36 | 3 | 1.052 |
| AF4593-1 | 101 | 59 | 27 | 12 | 36 | 52 | 0 | 0 | 0 | 52 | 0 | 1.057 |
| AF4702-2 | 405 | 309 | 139 | 1 | 16 | 76 | 5 | 1 | 0 | 82 | 6 | 1.065 |
| AF4975-3 | 141 | 83 | 37 | 5 | 19 | 73 | 2 | 1 | 0 | 76 | 3 | 1.073 |
| AF4815-1 | 200 | 99 | 44 | 4 | 31 | 63 | 2 | 0 | 0 | 65 | 2 | 1.056 |
| AF4831-2 | 64 | 16 | 7 | 10 | 63 | 27 | 0 | 0 | 0 | 27 | 0 | 1.058 |
| AF4831-3 | 103 | 67 | 30 | 2 | 17 | 75 | 3 | 3 | 0 | 81 | 6 | 1.056 |
| AF4841-1 | 121 | 69 | 31 | 4 | 29 | 61 | 5 | 1 | 0 | 67 | 6 | 1.061 |

Table 15 (cont'd). Production statistics for the University of Maine Advance Line Variety Trial potato selections in 2014.

| | Total | Marketable Yield[1] | | Size Distribution by Class (%)[2] | | | | | | Size Class Range (%) | | Specific |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | Yield (cwt/A) | (cwt/A) | % of standard | C | B | A1 | A2 | A3 | A4 | A1 to A3 | A2 to A3 | Gravity |
| AF4845-3 | 9 | 3 | 1 | 25 | 31 | 19 | 0 | 0 | 0 | 19 | 0 | 1.055 |
| AF4985-1 | 287 | 202 | 91 | 1 | 11 | 77 | 6 | 5 | 0 | 88 | 11 | 1.061 |
| AF4963-9 | 147 | 61 | 28 | 4 | 31 | 63 | 1 | 0 | 0 | 65 | 1 | 1.050 |
| AF5040-4 | 96 | 55 | 25 | 1 | 3 | 35 | 22 | 15 | 0 | 71 | 37 | 1.063 |
| AF5042-8 | 192 | 161 | 72 | 1 | 8 | 76 | 11 | 4 | 0 | 91 | 15 | 1.061 |
| AF5044-15 | 265 | 218 | 98 | 1 | 7 | 61 | 21 | 10 | 0 | 92 | 32 | 1.063 |
| AF5044-19 | 194 | 134 | 60 | 2 | 18 | 75 | 5 | 0 | 0 | 80 | 5 | 1.063 |
| AF5081-4 | 262 | 186 | 84 | 1 | 12 | 66 | 13 | 7 | 0 | 87 | 21 | 1.073 |
| AF5118-5 | 296 | 237 | 106 | 1 | 6 | 66 | 16 | 11 | 0 | 93 | 27 | 1.057 |
| AF5140-1 | 206 | 159 | 71 | 2 | 13 | 77 | 7 | 1 | 0 | 85 | 7 | 1.061 |
| AF5141-6 | 237 | 161 | 73 | 3 | 21 | 71 | 2 | 2 | 0 | 76 | 5 | 1.076 |
| AF5215-2 | 288 | 145 | 65 | 6 | 41 | 52 | 1 | 0 | 0 | 53 | 1 | 1.066 |
| AF5225-1 | 345 | 230 | 103 | 3 | 23 | 68 | 4 | 1 | 0 | 74 | 5 | 1.059 |
| AF5280-1 | 310 | 215 | 97 | 2 | 20 | 71 | 6 | 1 | 0 | 78 | 7 | 1.060 |
| AF5280-5 | 238 | 120 | 54 | 1 | 14 | 69 | 6 | 9 | 0 | 85 | 15 | 1.066 |
| AF5320-1 | 214 | 114 | 51 | 7 | 34 | 55 | 2 | 1 | 0 | 59 | 4 | 1.069 |
| AF5345-1 | 315 | 183 | 82 | 5 | 31 | 62 | 1 | 1 | 0 | 64 | 2 | 1.069 |
| AF5345-9 | 40 | 17 | 8 | 13 | 43 | 44 | 0 | 0 | 0 | 44 | 0 | 1.069 |
| *MSD*[3] | 51 | 49 | - | 33 | 15 | 18 | 7 | 7 | - | 18 | 9 | 0 |
| *P Value* | *<0001* | *<0001* | - | *ns* | *<0001* | *<0001* | *<0001* | *<0001* | *ns* | *<0001* | *<0001* | *<0001* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 16. Plant growth and tuber characteristics of University of Maine Advance Line Variety Trial potato selections in 2014.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Atlantic | 100 | 9 | 6 | 3 | 2 | 6 | 5 | 3 | 5 | 7 | |
| Elkton | 100 | 9 | 6 | 3 | 1 | 6 | 5 | 3 | 6 | 8 | |
| Goldrush | 100 | 8 | 9-6 | 3 | 1 | 5 | 3 | 6 | 6 | 7 | |
| H. Blackwell | 100 | 9 | 5-8 | 3 | 1 | 7 | 5 | 2 | 5 | 8 | |
| Marcy | 100 | 8 | 5-6 | 3 | 1 | 6 | 5 | 3 | 6 | 6 | heavy net |
| Snowden | 100 | 9 | 9-6 | 3 | 1 | 6 | 5 | 2 | 4 | 5 | heavy net |
| AF0338-17 | 100 | 9 | 5-6 | 4 | 1 | 6 | 5 | 3 | 5 | 5 | |
| AF4138-8 | 100 | 8 | 5-8 | 3 | 2 | 7 | 6 | 3 | 5 | 4 | partial net |
| AF4157-6 | 100 | 7 | 5-8 | 3 | 2 | 7 | 5 | 3 | 6 | 8 | |
| AF4386-16 | 100 | 9 | 9-6 | 3 | 1 | 6 | 5 | 3 | 6 | 5 | |
| AF4442-4 | 100 | 6 | 8 | 4 | 2 | 7 | 6 | 3 | 6 | 4 | lenticels |
| AF4532-8 | 100 | 6 | 9 | 3 | 2 | 5 | 3 | 6 | 6 | 6 | |
| AF4552-5 | 100 | 7 | 8 | 3 | 2 | 6 | 5 | 2 | 4 | 5 | |
| AF4614-2 | 100 | 9 | 8-5 | 3 | 2 | 8 | 6 | 3 | 6 | 5 | |
| AF4640-1 | 100 | 8 | 5-6 | 3 | 1 | 7 | 6 | 3 | 5 | 5 | |
| AF4550-2 | 100 | 6 | 6-9 | 2 | 3 | 1 | 6 | 3 | 6 | 6 | little flat |
| AF4565-1 | 100 | 9 | 5 | 2 | 3 | 2 | 7 | 4 | 5 | 4 | |
| AF4593-1 | 100 | 8 | 5-6 | 2 | 1 | 2 | 7 | 3 | 5 | 4 | scurf |
| AF4702-2 | 100 | 7 | 8-5 | 4 | 2 | 2 | 9 | 4 | 7 | 6 | few lenticels |
| AF4975-3 | 100 | 9 | 5-6 | 3 | 2 | 6 | 5 | 3 | 6 | 7 | |
| AF4815-1 | 100 | 8 | 5-6 | 2 | 1 | 2 | 6 | 3 | 6 | 4 | |
| AF4831-2 | 100 | 9 | 5-6 | 2 | 1 | 2 | 7 | 3 | 6 | 4 | |
| AF4831-3 | 100 | 7 | 5-6 | 2 | 1 | 2 | 6 | 3 | 5 | 3 | |
| AF4841-1 | 100 | 8 | 5 | 2 | 1 | 2 | 5 | 3 | 6 | 5 | |

Table 16 (cont'd). Plant growth and tuber characteristics of University of Maine Advance Line Variety Trial potato selections in 2014.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| AF4845-3 | 100 | 6 | 5-8 | 2 | 1 | 2 | 6 | 3 | 6 | 5 | |
| AF4985-1 | 100 | 7 | 9-6 | 3 | 1 | 2 | 7 | 3 | 5 | 3 | |
| AF4963-9 | 100 | 9 | 5 | 2 | 3 | 2 | 7 | 3 | 5 | 5 | |
| AF5040-4 | 100 | 7 | 8 | 4 | 4 | 9 | 6 | 3 | 6 | 5 | |
| AF5042-8 | 100 | 8 | 5 | 3 | 2 | 9 | 7 | 3 | 6 | 5 | few lenticels |
| AF5044-15 | 100 | 7 | 8 | 3 | 1 | 8 | 7 | 3 | 6 | 6 | few lenticels |
| AF5044-19 | 100 | 8 | 8 | 3 | 2 | 7 | 5 | 3 | 7 | 5 | |
| AF5081-4 | 100 | 7 | 8 | 4 | 3 | 9 | 6 | 3 | 6 | 5 | few lenticels |
| AF5118-5 | 100 | 6 | 8 | 4 | 3 | 9 | 7 | 3 | 6 | 5 | |
| AF5140-1 | 100 | 8 | 5-8 | 3 | 1 | 6 | 5 | 3 | 6 | 6 | |
| AF5141-6 | 100 | 8 | 5-8 | 3 | 4 | 6 | 5 | 3 | 7 | 5 | |
| AF5215-2 | 100 | 7 | 9-6 | 3 | 4 | 9 | 6 | 3 | 7 | 6 | red/pink eyes |
| AF5225-1 | 100 | 8 | 9-6 | 3 | 3 | 9 | 7 | 3 | 6 | 6 | |
| AF5280-1 | 100 | 9 | 6 | 3 | 1 | 8 | 7 | 3 | 6 | 6 | few lenticels |
| AF5280-5 | 100 | 8 | 5 | 3 | 1 | 9 | 6 | 3 | 5 | 5 | |
| AF5320-1 | 100 | 7 | 5-6 | 3 | 1 | 8 | 7 | 2 | 7 | 5 | few lenticels |
| AF5345-1 | 100 | 8 | 5 | 3 | 1 | 8 | 7 | 3 | 6 | 6 | |
| AF5345-9 | 100 | 9 | 5-3 | 2 | 1 | 7 | 6 | 3 | 6 | 4 | |

[1]See rating system outlined in Table 10.

[2]See rating system outlined in Table 11.

Table 17. External and internal defects of University of Maine Advance Line Variety Trial potato selections in 2014.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 0 | 0 | 6 | 6 | 1 | 0 | 0 | 8 | 3 | 3 | 1 |
| Elkton | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Goldrush | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| H. Blackwell | 0 | 0 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Marcy | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snowden | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF0338-17 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4138-8 | 0 | 0 | 1 | 18 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4157-6 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4386-16 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4442-4 | 0 | 0 | 1 | 31 | 32 | 4 | 0 | 0 | 0 | 6 | 3 | 0 |
| AF4532-8 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4552-5 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4614-2 | 0 | 0 | 0 | 21 | 22 | 6 | 0 | 0 | 1 | 3 | 0 | 0 |
| AF4640-1 | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4550-2 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4565-1 | 0 | 0 | 0 | 19 | 19 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| AF4593-1 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4702-2 | 0 | 0 | 1 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4975-3 | 0 | 0 | 0 | 34 | 34 | 1 | 0 | 0 | 0 | 4 | 3 | 0 |
| AF4815-1 | 0 | 0 | 0 | 21 | 21 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| AF4831-2 | 2 | 0 | 0 | 17 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4831-3 | 1 | 0 | 0 | 20 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4841-1 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 17 (cont'd). External and internal defects of University of Maine Advance Line Variety Trial potato selections in 2014.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| AF4845-3 | 0 | 0 | 0 | 65 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4985-1 | 1 | 0 | 1 | 22 | 25 | 0 | 0 | 0 | 0 | 3 | 3 | 0 |
| AF4963-9 | 0 | 0 | 0 | 37 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5040-4 | 0 | 0 | 3 | 50 | 52 | 7 | 0 | 0 | 0 | 3 | 0 | 0 |
| AF5042-8 | 0 | 0 | 0 | 8 | 8 | 6 | 0 | 0 | 0 | 1 | 0 | 1 |
| AF5044-15 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5044-19 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| AF5081-4 | 0 | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 6 | 6 | 4 | 0 |
| AF5118-5 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 4 | 8 | 3 | 0 |
| AF5140-1 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| AF5141-6 | 0 | 1 | 0 | 9 | 10 | 3 | 0 | 0 | 0 | 4 | 1 | 0 |
| AF5215-2 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| AF5225-1 | 0 | 0 | 1 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5280-1 | 1 | 0 | 0 | 10 | 11 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| AF5280-5 | 0 | 0 | 0 | 41 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5320-1 | 1 | 0 | 0 | 14 | 16 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| AF5345-1 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5345-9 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *MSD*[3] | - | - | - | 15 | 16 | 4 | - | - | 4 | - | 3 | - |
| *P Value* | *ns* | *ns* | *ns* | *<0.001* | *<0.001* | *<0.001* | *ns* | *ns* | *0.0300* | *ns* | *0.0300* | *ns* |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 7. UNIVERSITY OF MAINE EARLY LINE, 2014

### *General Comments*

A goal of this University of Maine potato variety trial is to continue gathering data on early-line potato selections for potential Florida production.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 19, 2014 |
| Vine Kill Dates | May 23, 2014 |
| Harvest Date | June 12, 2014 |
| Season Length | 93 days planting to vine kill; 113 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N); Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 8 (Standard: Atlantic) |
| Number of Clones | 40 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 1 |
| Plot Size | 16 ft (4.9 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 41 DAP |
| Highest Total Yield | Satina (426 cwt or 47.7 T/ha) |
| Highest Marketable Yield | AF5400-2 (296 cwt or 33.1 T/ha) |

Table 18. Production statistics for 2014 Univeristy of Maine Early Selection Potato Variety Trial in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | MFX | 276 | 223 | 100 | 0 | 9 | 71 | 13 | 7 | 0 | 91 | 19 | 1.069 |
| Harley Blackwell | MFX | 312 | 210 | 94 | 4 | 18 | 70 | 8 | 0 | 0 | 78 | 8 | 1.067 |
| Fabula | MFX | 270 | 137 | 61 | 1 | 16 | 77 | 6 | 0 | 0 | 83 | 6 | 1.051 |
| Goldrush | MFX | 342 | 241 | 108 | 1 | 22 | 73 | 2 | 2 | 0 | 77 | 4 | 1.058 |
| LaChipper | MFX | 149 | 36 | 16 | 2 | 32 | 67 | 0 | 0 | 0 | 67 | 0 | 1.060 |
| Satina | MFX | 426 | 252 | 113 | 4 | 15 | 74 | 1 | 6 | 0 | 82 | 7 | 1.048 |
| Snowden | MFX | 358 | 276 | 123 | 1 | 15 | 76 | 4 | 5 | 0 | 85 | 9 | 1.059 |
| Yukon Gold | MFX | 246 | 163 | 73 | 2 | 14 | 71 | 13 | 0 | 0 | 84 | 13 | 1.066 |
| AF0338-17 | UM | 292 | 181 | 81 | 4 | 18 | 75 | 3 | 0 | 0 | 79 | 3 | 1.071 |
| AF5382-12 | UM | 251 | 166 | 74 | 3 | 15 | 81 | 1 | 0 | 0 | 82 | 1 | 1.067 |
| AF5386-4 | UM | 262 | 194 | 87 | 1 | 18 | 74 | 7 | 0 | 0 | 81 | 7 | 1.078 |
| AF5387-2 | UM | 235 | 137 | 61 | 3 | 31 | 66 | 0 | 0 | 0 | 66 | 0 | 1.070 |
| AF5387-6 | UM | 263 | 183 | 82 | 2 | 23 | 70 | 5 | 0 | 0 | 75 | 5 | 1.071 |
| AF5391-1 | UM | 233 | 135 | 60 | 3 | 32 | 63 | 2 | 0 | 0 | 65 | 2 | 1.067 |
| AF5391-2 | UM | 172 | 105 | 47 | 1 | 17 | 82 | 0 | 0 | 0 | 82 | 0 | 1.075 |
| AF5393-1 | UM | 349 | 205 | 92 | 5 | 22 | 74 | 0 | 0 | 0 | 74 | 0 | 1.064 |
| AF5395-10 | UM | 226 | 149 | 67 | 2 | 12 | 75 | 12 | 0 | 0 | 87 | 12 | 1.066 |
| AF5398-4 | UM | 142 | 80 | 36 | 3 | 31 | 66 | 0 | 0 | 0 | 66 | 0 | - |
| AF5399-5 | UM | 242 | 143 | 64 | 1 | 31 | 67 | 0 | 0 | 0 | 67 | 0 | 1.062 |
| AF5400-2 | UM | 414 | 296 | 132 | 0 | 4 | 35 | 32 | 28 | 0 | 96 | 61 | 1.066 |
| AF5401-1 | UM | 244 | 141 | 63 | 5 | 29 | 58 | 7 | 0 | 0 | 65 | 7 | 1.068 |
| AF5403-3 | UM | 323 | 205 | 92 | 3 | 17 | 55 | 17 | 8 | 0 | 80 | 25 | 1.068 |
| AF5415-1 | UM | 358 | 274 | 122 | 1 | 10 | 81 | 2 | 5 | 0 | 89 | 8 | 1.054 |
| AF5416-2 | UM | 366 | 258 | 116 | 3 | 11 | 74 | 12 | 0 | 0 | 86 | 12 | 1.062 |

Table 18 (cont'd). Production statistics for 2014 Univeristy of Maine Early Selection Potato Variety Trial in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AF5426-1 | UM | 187 | 115 | 52 | 2 | 17 | 73 | 8 | 0 | 0 | 81 | 8 | 1.062 |
| AF5428-7 | UM | 262 | 126 | 56 | 3 | 24 | 59 | 4 | 10 | 0 | 73 | 14 | 1.068 |
| AF5432-5 | UM | 365 | 231 | 103 | 3 | 24 | 72 | 2 | 0 | 0 | 74 | 2 | 1.066 |
| AF5433-1 | UM | 183 | 112 | 50 | 4 | 29 | 67 | 0 | 0 | 0 | 67 | 0 | 1.068 |
| AF5433-10 | UM | 338 | 265 | 119 | 3 | 13 | 74 | 8 | 2 | 0 | 84 | 10 | 1.063 |
| AF5435-7 | UM | 243 | 169 | 76 | 1 | 17 | 77 | 2 | 3 | 0 | 82 | 5 | 1.068 |
| AF5444-1 | UM | 248 | 179 | 80 | 2 | 19 | 79 | 0 | 0 | 0 | 79 | 0 | 1.074 |
| AF5445-2 | UM | 324 | 189 | 85 | 2 | 28 | 70 | 0 | 0 | 0 | 70 | 0 | 1.075 |
| AF5446-11 | UM | 305 | 272 | 122 | 1 | 2 | 56 | 22 | 19 | 0 | 97 | 41 | 1.056 |
| AF5447-4 | UM | 275 | 223 | 100 | 0 | 6 | 61 | 33 | 0 | 0 | 93 | 33 | 1.069 |
| AF5467-13 | UM | 220 | 116 | 52 | 4 | 30 | 62 | 5 | 0 | 0 | 66 | 5 | 1.067 |
| AF5412-3 | UM | 299 | 240 | 107 | 4 | 11 | 78 | 7 | 0 | 0 | 85 | 7 | 1.051 |
| WAF10209R-8 | UM | 150 | 80 | 36 | 3 | 9 | 83 | 5 | 0 | 0 | 89 | 5 | 1.055 |
| NDAF092231C-1 | UM | 174 | 72 | 32 | 10 | 45 | 45 | 0 | 0 | 0 | 45 | 0 | 1.063 |
| NDAF092241C-3 | UM | 260 | 182 | 81 | 0 | 21 | 79 | 0 | 0 | 0 | 79 | 0 | 1.051 |
| NDAF102568C-2 | UM | 70 | 18 | 8 | 5 | 21 | 74 | 0 | 0 | 0 | 74 | 0 | - |
| NDAF102571B-5 | UM | 147 | 83 | 37 | 5 | 29 | 66 | 0 | 0 | 0 | 66 | 0 | 1.057 |
| NDAF102573-2 | UM | 109 | 60 | 27 | 4 | 27 | 69 | 0 | 0 | 0 | 69 | 0 | 1.061 |
| NDAF102573-3 | UM | 157 | 96 | 43 | 2 | 27 | 72 | 0 | 0 | 0 | 72 | 0 | 1.055 |
| NDAF102575B-5 | UM | 70 | 39 | 17 | 3 | 22 | 75 | 0 | 0 | 0 | 75 | 0 | 1.060 |
| NDAF102575B-7 | UM | 24 | 16 | 7 | 5 | 19 | 77 | 0 | 0 | 0 | 77 | 0 | - |
| NDAF102576B-1 | UM | 77 | 43 | 19 | 5 | 12 | 83 | 0 | 0 | 0 | 83 | 0 | 1.059 |
| NDAF102576B-4 | UM | 131 | 69 | 31 | 3 | 25 | 72 | 0 | 0 | 0 | 72 | 0 | 1.059 |
| NDAF092274b-2 | UM | 242 | 146 | 65 | 3 | 12 | 81 | 5 | 0 | 0 | 85 | 5 | 1.061 |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

Table 19. Plant growth and tuber characteristics of the 2014 Univeristy of Maine Early Selection Potato Variety Trial.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP |
| Atlantic | 100 | 8 | 5-6 | 3 | 2 | 7 | 5 | 3 | 6 | 7 |
| Harley Blackwell | 100 | 9 | 8-9 | 3 | 1 | 6 | 5 | 2 | 6 | 6 |
| Fabula | 100 | 6 | 5-8 | 3 | 4 | 9 | 6 | 4 | 6 | 5 |
| Goldrush | 100 | 8 | 9-6 | 3 | 2 | 4 | 3 | 5 | 6 | 6 |
| LaChipper | 100 | 7 | 6 | 3 | 1 | 8 | 6 | 3 | 4 | 4 |
| Satina | 100 | 9 | 5-6 | 3 | 3 | 9 | 6 | 3 | 4 | 5 |
| Snowden | 100 | 8 | 8-9 | 3 | 1 | 6 | 5 | 3 | 4 | 5 |
| Yukon Gold | 100 | 8 | 8 | 1 | 5 | 9 | 6 | 3 | 7 | 7 |
| AF0338-17 | 100 | 8 | 5-8 | 3 | 1 | 7 | 5 | 3 | 5 | 6 |
| AF5382-12 | 100 | 8 | 9 | 3 | 4 | 9 | 6 | 3 | 5 | 5 |
| AF5386-4 | 100 | 8 | 5-8 | 2 | 2 | 8 | 7 | 3 | 7 | 5 |
| AF5387-2 | 100 | 9 | 5-8 | 1 | 1 | 7 | 5 | 3 | 5 | 5 |
| AF5387-6 | 100 | 8 | 5 | 3 | 2 | 7 | 6 | 3 | 6 | 5 |
| AF5391-1 | 100 | 9 | 5 | 2 | 1 | 8 | 6 | 3 | 6 | 6 |
| AF5391-2 | 100 | 7 | 5 | 3 | 1 | 8 | 6 | 3 | 6 | 7 |
| AF5393-1 | 100 | 8 | 5 | 3 | 2 | 7 | 5 | 3 | 6 | 6 |
| AF5395-10 | 100 | 8 | 8-9 | 3 | 2 | 8 | 7 | 3 | 6 | 8 |
| AF5398-4 | 100 | 9 | 5 | 2 | 3 | 7 | 6 | 3 | 6 | 7 |
| AF5399-5 | 100 | 8 | 6-9 | 3 | 4 | 9 | 5 | 3 | 6 | 7 |
| AF5400-2 | 100 | 9 | 8-5 | 3 | 1 | 7 | 6 | 3 | 6 | 5 |
| AF5401-1 | 100 | 8 | 5 | 3 | 3 | 9 | 7 | 3 | 5 | 6 |
| AF5403-3 | 100 | 9 | 6-9 | 3 | 3 | 7 | 6 | 3 | 6 | 5 |
| AF5415-1 | 100 | 9 | 5-8 | 3 | 1 | 8 | 7 | 4 | 6 | 6 |
| AF5416-2 | 100 | 9 | 8-5 | 3 | 1 | 7 | 5 | 3 | 5 | 6 |

Table 19 (cont'd). Plant growth and tuber characteristics of the 2014 Univeristy of Maine Early Selection Potato Variety Trial.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP |
| AF5426-1 | 100 | 9 | 6 | 2 | - | - | - | - | - | - |
| AF5428-7 | 100 | 9 | 5 | 3 | 2 | 7 | 6 | 2 | 4 | 4 |
| AF5432-5 | 100 | 9 | 6-9 | 2 | 2 | 7 | 5 | 3 | 6 | 4 |
| AF5433-1 | 100 | 8 | 5-8 | 2 | 3 | 9 | 7 | 3 | 5 | 7 |
| AF5433-10 | 100 | 9 | 5-8 | 3 | 1 | 7 | 6 | 3 | 5 | 7 |
| AF5435-7 | 100 | 9 | 8-9 | 3 | 3 | 7 | 6 | 3 | 5 | 5 |
| AF5444-1 | 100 | 9 | 5-8 | 2 | 1 | 8 | 7 | 3 | 6 | 6 |
| AF5445-2 | 100 | 9 | 6 | 2 | 1 | 7 | 6 | 3 | 5 | 5 |
| AF5446-11 | 100 | 9 | 9-6 | 3 | 1 | 8 | 6 | 3 | 6 | 5 |
| AF5447-4 | 100 | 9 | 5-8 | 2 | 4 | 9 | 6 | 3 | 6 | 5 |
| AF5467-13 | 100 | 9 | 5-6 | 3 | 2 | 7 | 5 | 3 | 7 | 7 |
| AF5412-3 | 100 | 8 | 9-6 | 3 | 9 | 1 | 7 | 5 | 5 | 6 |
| WAF10209R-8 | 100 | 8 | 5-6 | 2 | 2 | 2 | 6 | 3 | 6 | 4 |
| NDAF092231C-1 | 100 | 8 | 5-3 | 2 | 1 | 1 | 7 | 3 | 5 | 7 |
| NDAF092241C-3 | 100 | 9 | 5 | 2 | 1 | 1 | 7 | 3 | 4 | 4 |
| NDAF102568C-2 | 100 | 7 | 8-9 | 2 | 1 | 3 | 7 | 3 | 6 | 4 |
| NDAF102571B-5 | 100 | 7 | 5-6 | 2 | 1 | 2 | 7 | 3 | 5 | 6 |
| NDAF102573-2 | 100 | 7 | 5-6 | 1 | 1 | 2 | 6 | 3 | 4 | 5 |
| NDAF102573-3 | 100 | 8 | 5-8 | 3 | 1 | 2 | 6 | 3 | 5 | 6 |
| NDAF102575B-5 | 100 | 7 | 5-6 | 2 | 1 | 2 | 6 | 3 | 5 | 6 |
| NDAF102575B-7 | 100 | 8 | 5-6 | 2 | 1 | 2 | 6 | 3 | 6 | 5 |
| NDAF102576B-1 | 100 | 8 | 9-6 | 3 | 1 | 2 | 5 | 3 | 5 | 5 |
| NDAF102576B-4 | 100 | 8 | 6-9 | 3 | 2 | 2 | 6 | 3 | 4 | 6 |
| NDAF092274b-2 | 100 | 7 | 5-8 | 3 | 1 | 2 | 6 | 3 | 5 | 6 |

[1]See rating system outlined in Table 10.

[2]See rating system outlined in Table 11.

Table 20. External and internal defects of the 2014 Univeristy of Maine Early Selection Potato Variety Trial.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fabula | 0 | 0 | 2 | 38 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Goldrush | 0 | 1 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LaChipper | 0 | 0 | 2 | 62 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Satina | 0 | 0 | 1 | 27 | 28 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| Snowden | 1 | 0 | 1 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yukon Gold | 0 | 0 | 1 | 21 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF0338-17 | 0 | 0 | 0 | 21 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5382-12 | 2 | 0 | 2 | 16 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5386-4 | 0 | 0 | 0 | 9 | 9 | 5 | 0 | 0 | 0 | 5 | 0 | 0 |
| AF5387-2 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5387-6 | 0 | 1 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5391-1 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5391-2 | 0 | 4 | 2 | 19 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5393-1 | 0 | 1 | 5 | 14 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5395-10 | 0 | 0 | 2 | 22 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5398-4 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5399-5 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5400-2 | 0 | 0 | 1 | 24 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5401-1 | 0 | 0 | 0 | 11 | 11 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5403-3 | 0 | 0 | 1 | 19 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5415-1 | 2 | 0 | 0 | 12 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5416-2 | 0 | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 20 (cont'd). External and internal defects of the 2014 Univeristy of Maine Early Selection Potato Variety Trial.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| AF5426-1 | 3 | 0 | 1 | 19 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5428-7 | 0 | 0 | 3 | 31 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5432-5 | 0 | 0 | 6 | 8 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5433-1 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| AF5433-10 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| AF5435-7 | 1 | 0 | 1 | 14 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5444-1 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| AF5445-2 | 0 | 1 | 4 | 12 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5446-11 | 0 | 0 | 0 | 8 | 8 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5447-4 | 2 | 0 | 1 | 10 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5467-13 | 0 | 0 | 0 | 20 | 20 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5412-3 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WAF10209R-8 | 0 | 0 | 0 | 40 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF092231C-1 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF092241C-3 | 1 | 0 | 0 | 11 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102568C-2 | 0 | 0 | 0 | 64 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102571B-5 | 0 | 0 | 1 | 12 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102573-2 | 0 | 0 | 0 | 21 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102573-3 | 0 | 0 | 1 | 14 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102575B-5 | 0 | 0 | 0 | 26 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102575B-7 | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102576B-1 | 5 | 0 | 0 | 28 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102576B-4 | 0 | 0 | 0 | 27 | 27 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| NDAF092274b-2 | 0 | 0 | 0 | 29 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

# CHAPTER 8. UNIVERSITY OF MAINE EARLY GENERATION, 2014

### *General Comments*

The University of Maine Early Generation gives us an opportunity to look at the newest breeding clones for the first time. The plot size is limited to 8 hills, as seed supply is limited. This trial only evaluated red and purple-skinned clones.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 20, 2014 |
| Vine Kill Dates | May 23, 2014 |
| Harvest Date | June 09, 2014 |
| Season Length | 92 days planting to vine kill;<br>109 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 7 (Standard: Red LaSoda) |
| Number of Clones | 26 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 1 |
| Plot Size | 5.3 ft (1.6 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 41 DAP |
| Highest Total Yield | AAF08155-1 (600 cwt or 67.1 T/ha) |
| Best Appearance Rating | Peter Wilcox & NDAF102696C-5 ( 8, very good) |

Table 21. Production statistics for the 2014 Univeristy of Maine 8-hill Early Generation Potato Variety Trial.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Red LaSoda | MFX | 420 | 331 | 100 | 0 | 16 | 79 | 5 | 0 | 0 | 84 | 5 | 1.058 |
| Atlantic | MFX | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | . |
| Adirondack Blue | MFX | 378 | 298 | 90 | 2 | 19 | 69 | 10 | 0 | 0 | 79 | 10 | 1.057 |
| Chieftain | UM | 492 | 375 | 113 | 2 | 6 | 77 | 14 | 0 | 0 | 91 | 14 | 1.056 |
| Dark Red Norland | UM | 320 | 197 | 59 | 4 | 22 | 75 | 0 | 0 | 0 | 75 | 0 | 1.058 |
| Peter Wilcox | MFX | 469 | 310 | 93 | 0 | 30 | 70 | 0 | 0 | 0 | 70 | 0 | 1.065 |
| Yukon Gold | UM | 391 | 360 | 109 | 0 | 8 | 21 | 35 | 37 | 0 | 92 | 71 | 1.068 |
| AF5530-2 | UM | 267 | 108 | 33 | 3 | 48 | 49 | 0 | 0 | 0 | 49 | 0 | 1.052 |
| AF5530-5 | UM | 361 | 183 | 55 | 0 | 25 | 66 | 9 | 0 | 0 | 75 | 9 | 1.058 |
| AF5531-4 | UM | 159 | 40 | 12 | 6 | 47 | 48 | 0 | 0 | 0 | 48 | 0 | . |
| AF5532-2 | UM | 324 | 175 | 53 | 4 | 12 | 43 | 30 | 11 | 0 | 85 | 41 | 1.046 |
| AF5589-4 | UM | 413 | 290 | 88 | 2 | 16 | 63 | 19 | 0 | 0 | 82 | 19 | 1.048 |
| AF5589-11 | UM | 506 | 289 | 87 | 3 | 22 | 75 | 0 | 0 | 0 | 75 | 0 | 1.057 |
| AF5590-2 | UM | 410 | 277 | 83 | 6 | 8 | 64 | 5 | 18 | 0 | 86 | 22 | 1.059 |
| AF5590-4 | UM | 445 | 239 | 72 | 0 | 34 | 61 | 0 | 5 | 0 | 66 | 5 | 1.052 |
| AAF08155-1 | UM | 600 | 417 | 126 | 2 | 18 | 75 | 5 | 0 | 0 | 80 | 5 | 1.062 |
| AAF08167-1 | UM | 510 | 157 | 47 | 13 | 43 | 44 | 0 | 0 | 0 | 44 | 0 | 1.057 |
| COAF10018-2 | UM | 250 | 167 | 50 | 4 | 22 | 75 | 0 | 0 | 0 | 75 | 0 | 1.053 |
| COAF10223-2 | UM | 257 | 83 | 25 | 7 | 49 | 44 | 0 | 0 | 0 | 44 | 0 | 1.059 |
| NDAF102691B-7 | UM | 372 | 250 | 75 | 3 | 23 | 75 | 0 | 0 | 0 | 75 | 0 | 1.070 |

Table 21 (cont'd). Production statistics for the 2014 Univeristy of Maine 8-hill Early Generation Potato Variety Trial.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NDAF102696C-1 | UM | 319 | 227 | 69 | 3 | 21 | 75 | 0 | 0 | 0 | 75 | 0 | 1.062 |
| NDAF102696C-3 | UM | 327 | 199 | 60 | 4 | 31 | 65 | 0 | 0 | 0 | 65 | 0 | 1.059 |
| NDAF102696C-5 | UM | 437 | 202 | 61 | 8 | 30 | 62 | 0 | 0 | 0 | 62 | 0 | 1.067 |
| NDAF102696C-7 | UM | 69 | 5 | 2 | 0 | 35 | 65 | 0 | 0 | 0 | 65 | 0 | . |
| NDAF102700CB-3 | UM | 274 | 188 | 57 | 5 | 12 | 83 | 0 | 0 | 0 | 83 | 0 | 1.061 |
| NDAF102735CB-1 | UM | 384 | 338 | 102 | 0 | 6 | 68 | 26 | 0 | 0 | 94 | 26 | 1.073 |
| NDAF102735CB-2 | UM | 31 | 16 | 5 | 0 | 36 | 20 | 44 | 0 | 0 | 64 | 44 | . |
| NDAF102735CB-3 | UM | 275 | 144 | 44 | 0 | 14 | 86 | 0 | 0 | 0 | 86 | 0 | 1.047 |
| NDAF102748C-4 | UM | 419 | 307 | 93 | 1 | 7 | 91 | 0 | 0 | 0 | 91 | 0 | 1.059 |
| NDAF102766-1 | UM | 330 | 178 | 54 | 5 | 18 | 77 | 0 | 0 | 0 | 77 | 0 | 1.055 |
| NDAF102904-5 | UM | 412 | 323 | 97 | 1 | 13 | 86 | 0 | 0 | 0 | 86 | 0 | 1.066 |
| NDAF102950-3 | UM | 412 | 341 | 103 | 0 | 2 | 39 | 38 | 21 | 0 | 98 | 58 | 1.050 |
| NDAF113303C-8 | UM | 376 | 160 | 48 | 4 | 18 | 50 | 29 | 0 | 0 | 78 | 29 | 1.055 |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

Table 22. Plant growth and tuber characteristics of the 2014 Univeristy of Maine 8-hill Early Generation Potato Variety Trial.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Red LaSoda | 100 | 8 | 6 | 3 | 1 | 2 | 6 | 3 | 3 | 5 | |
| Atlantic | 100 | 9 | 6 | 3 | 2 | 6 | 5 | 3 | 6 | 7 | |
| Adirondack Blue | 100 | 8 | 5-6 | 2 | 9 | 1 | 6 | 4 | 6 | 5 | |
| Chieftain | 100 | 6 | 8-9 | 3 | 1 | 2 | 6 | 3 | 5 | 7 | |
| Dark Red Norland | 100 | 8 | 5 | 1 | 1 | 2 | 6 | 3 | 5 | 4 | |
| Peter Wilcox | 100 | 8 | 6 | 3 | 5 | 1 | 6 | 3 | 4 | 8 | |
| Yukon Gold | 100 | 7 | 8-9 | 2 | 5 | 9 | 6 | 3 | 6 | 5 | |
| AF5530-2 | 100 | 9 | 5-6 | 3 | 2 | 9 | 7 | 3 | 6 | 6 | red around eyes |
| AF5530-5 | 100 | 9 | 5-8 | 3 | 3 | 9-2 | 6 | 3 | 6 | 5 | |
| AF5531-4 | 100 | 6 | 5-8 | 3 | 3 | 2 | 7 | 3 | 7 | 4 | dark red skin |
| AF5532-2 | 100 | 7 | 5 | 3 | 1 | 2 | 7 | 3 | 6 | 4 | |
| AF5589-4 | 100 | 5 | 6-9 | 3 | 5 | 9 | 6 | 3 | 6 | 7-8 | |
| AF5589-11 | 100 | 8 | 8-9 | 4 | 5 | 9 | 6 | 3 | 6 | 6 | red around eyes |
| AF5590-2 | 100 | 6 | 8-9 | 3 | 4 | 2 | 6 | 3 | 6 | 4 | |
| AF5590-4 | 100 | 7 | 9-6 | 2 | 1 | 2 | 6 | 3 | 5 | 5 | |
| AAF08155-1 | 100 | 8 | 8-5 | 3 | 1 | 7-1 | 6 | 3 | 4 | 4 | little flat |
| AAF08167-1 | 100 | 8 | 5-8 | 3 | 5 | 9 | 7 | 3 | 5 | 5 | purple eyes |
| COAF10018-2 | 100 | 8 | 6 | 2 | 4 | 9 | 7 | 3 | 5 | 7-8 | pink eyes |
| COAF10223-2 | 100 | 7 | 5 | 3 | 4 | 2 | 7 | 3 | 6 | 4 | |
| NDAF102691B-7 | 100 | 7 | 6-9 | 3 | 1 | 2 | 6 | 3 | 5 | 6 | |

Table 22 (cont'd). Plant growth and tuber characteristics of the 2014 Univeristy of Maine 8-hill Early Generation Potato Variety Trial.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| NDAF102696C-1 | 100 | 6 | 5 | 2 | 1 | 2 | 7 | 3 | 4 | 7 | |
| NDAF102696C-3 | 100 | 7 | 6 | 2 | 1 | 1 | 7 | 3 | 6 | 6 | |
| NDAF102696C-5 | 100 | 8 | 5-6 | 3 | 1 | 2 | 7 | 3 | 5 | 8 | |
| NDAF102696C-7 | 0 | . | . | . | 1 | 2 | 7 | 3 | 5 | 5 | |
| NDAF102700CB-3 | 100 | 7 | 5 | 3 | 1 | 1 | 6 | 3 | 6 | 6 | |
| NDAF102735CB-1 | 100 | 6 | 8 | 3 | 2 | 6 | 5 | 3 | 6 | 7 | |
| NDAF102735CB-2 | 100 | 5 | 5 | 3 | 1 | 2 | 7 | 3 | 5 | 4 | |
| NDAF102735CB-3 | 100 | 6 | 8-9 | 2 | 1 | 2 | 6 | 3 | 5 | 5 | |
| NDAF102748C-4 | 100 | 8 | 6 | 3 | 2 | 2 | 6 | 4 | 5 | 6 | pink vascular edge |
| NDAF102766-1 | 100 | 6 | 8-5 | 3 | 1 | 2 | 7 | 3 | 6 | 6 | |
| NDAF102904-5 | 100 | 8 | 6 | 3 | 1 | 2 | 5 | 3 | 6 | 6 | dark red skin |
| NDAF102950-3 | 100 | 6 | 5-6 | 3 | 1 | 2 | 7 | 3 | 5 | 6 | |
| NDAF113303C-8 | 100 | 7 | 8-5 | 3 | 1 | 2 | 7 | 3 | 6 | 5 | |

[1]See rating system outlined in Table 10.

[2]See rating system outlined in Table 11.

Table 23. External and internal defects of the 2014 Univeristy of Maine 8-hill Early Generation Potato Variety Trial.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Red LaSoda | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Atlantic | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adirondack Blue | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Chieftain | 0 | 0 | 0 | 17 | 17 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Dark Red Norland | 0 | 2 | 0 | 15 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Peter Wilcox | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yukon Gold | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| AF5530-2 | 0 | 0 | 0 | 17 | 17 | 0 | 0 | 0 | 6 | 0 | 0 | 0 |
| AF5530-5 | 0 | 5 | 0 | 28 | 32 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| AF5531-4 | 0 | 0 | 0 | 47 | 47 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| AF5532-2 | 0 | 0 | 0 | 36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5589-4 | 0 | 0 | 4 | 10 | 14 | 0 | 0 | 0 | 60 | 5 | 0 | 20 |
| AF5589-11 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5590-2 | 8 | 0 | 0 | 14 | 22 | 0 | 0 | 0 | 15 | 0 | 5 | 10 |
| AF5590-4 | 0 | 0 | 0 | 19 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AAF08155-1 | 0 | 8 | 0 | 5 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AAF08167-1 | 0 | 0 | 0 | 30 | 30 | 5 | 0 | 0 | 15 | 10 | 5 | 0 |
| COAF10018-2 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 10 | 5 | 5 |
| COAF10223-2 | 0 | 0 | 0 | 26 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102691B-7 | 3 | 0 | 0 | 7 | 10 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |

Table 23 (cont'd). External and internal defects of the 2014 Univeristy of Maine 8-hill Early Generation Potato Variety Trial.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| NDAF102696C-1 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102696C-3 | 3 | 0 | 0 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102696C-5 | 0 | 0 | 0 | 26 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102696C-7 | 0 | 0 | 0 | 88 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102700CB-3 | 0 | 0 | 0 | 17 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102735CB-1 | 0 | 0 | 0 | 6 | 6 | 10 | 0 | 0 | 5 | 0 | 5 | 5 |
| NDAF102735CB-2 | 0 | 0 | 0 | 19 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102735CB-3 | 0 | 0 | 0 | 39 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102748C-4 | 3 | 3 | 0 | 14 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102766-1 | 17 | 0 | 0 | 13 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102904-5 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF102950-3 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDAF113303C-8 | 0 | 0 | 0 | 46 | 46 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

# CHAPTER 9. NATIONAL CHIP PROCESSING TRIAL, 2014

***General Comments***

In the past, many selections from breeding programs may have been eliminated before they have had an opportunity to be evaluated in many locations. This study has been set up to evaluate the earliest selections from public breeding programs. These selections are also evaluated in several other locations across the United States. Clones that performed the best at multiple locations are then compared and kept for further evaluation. This trial is supported by the United States Potato Board.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 3, 2014 |
| Vine Kill Dates | N/A |
| Harvest Date | June 16, 2014 |
| Season Length | 105 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 5 (Standard: Atlantic) |
| Number of Clones | 187 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 1 & 2 |
| Plot Size | 10 ft (3.3 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 37 DAP |
| Highest Total Yield | TX09396-1W (450 cwt or 50.4 T/ha) |
| Highest Marketable Yield | AF5292-4 (402 cwt or 45.0 T/ha) |
| Highest Specific Gravity | MSV241-2 (1.094) |

Table 24. Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | Size Class Range (%) A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | MFX | 352 | 298 | 100 | 1 | 8 | 53 | 19 | 18 | 0 | 91 | 37 | 1.072 |
| Atlantic | MFX | 313 | 181 | 61 | 1 | 9 | 43 | 25 | 23 | 0 | 91 | 48 | 1.072 |
| Atlantic | MFX | 329 | 258 | 87 | 1 | 8 | 35 | 30 | 25 | 0 | 91 | 56 | 1.074 |
| Atlantic | MFX | 349 | 244 | 82 | 2 | 7 | 69 | 16 | 7 | 0 | 91 | 23 | 1.073 |
| Atlantic | MFX | 310 | 255 | 85 | 1 | 5 | 66 | 20 | 8 | 0 | 94 | 28 | 1.069 |
| Elkton | USDA | 361 | 313 | 105 | 1 | 9 | 52 | 29 | 10 | 0 | 90 | 38 | 1.068 |
| Elkton | USDA | 325 | 264 | 89 | 2 | 13 | 62 | 12 | 11 | 0 | 84 | 22 | 1.070 |
| Elkton | USDA | 312 | 267 | 89 | 1 | 13 | 62 | 17 | 8 | 0 | 86 | 24 | 1.076 |
| Elkton | USDA | 379 | 358 | 120 | 1 | 4 | 55 | 22 | 18 | 0 | 94 | 40 | 1.069 |
| Elkton | USDA | 366 | 304 | 102 | 1 | 8 | 71 | 10 | 10 | 0 | 91 | 21 | 1.070 |
| Harley Blackwell | MFX | 355 | 280 | 94 | 2 | 13 | 68 | 12 | 5 | 0 | 85 | 17 | 1.068 |
| Harley Blackwell | MFX | 335 | 260 | 87 | 3 | 12 | 80 | 5 | 0 | 0 | 86 | 5 | 1.063 |
| Harley Blackwell | MFX | 320 | 245 | 82 | 2 | 14 | 74 | 8 | 3 | 0 | 84 | 10 | 1.072 |
| Harley Blackwell | MFX | 286 | 209 | 70 | 3 | 15 | 66 | 4 | 12 | 0 | 82 | 16 | 1.064 |
| Harley Blackwell | MFX | 286 | 204 | 68 | 3 | 18 | 62 | 11 | 6 | 0 | 79 | 18 | 1.081 |
| Marcy | MFX | 375 | 335 | 112 | 2 | 4 | 64 | 16 | 14 | 0 | 95 | 31 | 1.068 |
| Marcy | MFX | 240 | 197 | 66 | 0 | 6 | 69 | 12 | 12 | 0 | 94 | 24 | 1.064 |
| Marcy | MFX | 294 | 229 | 77 | 1 | 7 | 79 | 5 | 8 | 0 | 92 | 13 | 1.064 |
| Marcy | MFX | 206 | 156 | 52 | 1 | 3 | 39 | 11 | 37 | 9 | 87 | 48 | 1.061 |
| Marcy | MFX | 277 | 209 | 70 | 1 | 6 | 48 | 28 | 17 | 0 | 92 | 44 | 1.051 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Snowden | MFX | 321 | 247 | 83 | 1 | 10 | 67 | 14 | 9 | 0 | 89 | 22 | 1.065 |
| Snowden | MFX | 350 | 295 | 99 | 0 | 4 | 65 | 18 | 13 | 0 | 96 | 31 | 1.069 |
| Snowden | MFX | 322 | 303 | 101 | 1 | 2 | 65 | 17 | 16 | 0 | 98 | 32 | 1.067 |
| Snowden | MFX | 323 | 252 | 85 | 2 | 7 | 71 | 5 | 15 | 0 | 91 | 20 | 1.075 |
| Snowden | MFX | 333 | 299 | 100 | 2 | 2 | 63 | 14 | 18 | 0 | 96 | 33 | 1.071 |
| AC01144-1W | CSU | 369 | 216 | 72 | 2 | 25 | 73 | 0 | 0 | 0 | 73 | 0 | 1.062 |
| AC08094-2W | CSU | 319 | 233 | 78 | 1 | 10 | 78 | 10 | 0 | 0 | 89 | 10 | 1.054 |
| AF4386-16 | ME | 422 | 242 | 81 | 2 | 16 | 72 | 9 | 0 | 0 | 82 | 9 | 1.077 |
| AF4386-16 | ME | 335 | 190 | 64 | 5 | 32 | 59 | 5 | 0 | 0 | 64 | 5 | 1.065 |
| AF4442-4 | ME | 265 | 184 | 62 | 2 | 9 | 76 | 6 | 8 | 0 | 90 | 13 | 1.068 |
| AF4442-4 | ME | 214 | 114 | 38 | 3 | 12 | 71 | 14 | 0 | 0 | 85 | 14 | 1.062 |
| AF4552-5 | ME | 350 | 253 | 85 | 2 | 9 | 56 | 20 | 14 | 0 | 89 | 33 | 1.068 |
| AF4552-5 | ME | 291 | 182 | 61 | 2 | 15 | 65 | 18 | 0 | 0 | 84 | 18 | 1.070 |
| AF4648-2 | ME | 364 | 318 | 107 | 1 | 7 | 52 | 17 | 22 | 0 | 91 | 39 | 1.074 |
| AF4648-2 | ME | 325 | 308 | 103 | 0 | 0 | 63 | 19 | 17 | 0 | 99 | 37 | 1.075 |
| AF4971-3 | ME | 412 | 371 | 124 | 1 | 4 | 66 | 18 | 10 | 0 | 95 | 29 | 1.070 |
| AF4975-3 | ME | 127 | 31 | 11 | 3 | 30 | 67 | 0 | 0 | 0 | 67 | 0 | 1.077 |
| AF4975-3 | ME | 181 | 110 | 37 | 2 | 11 | 74 | 13 | 0 | 0 | 87 | 13 | 1.070 |
| AF5033-11 | ME | 216 | 175 | 59 | 2 | 6 | 73 | 13 | 7 | 0 | 92 | 19 | 1.063 |
| AF5033-13 | ME | 332 | 270 | 90 | 1 | 7 | 82 | 6 | 5 | 0 | 92 | 11 | 1.079 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AF5039-11 | ME | 253 | 200 | 67 | 2 | 12 | 81 | 4 | 0 | 0 | 86 | 4 | 1.067 |
| AF5039-15 | ME | 178 | 92 | 31 | 5 | 25 | 49 | 14 | 8 | 0 | 71 | 22 | 1.066 |
| AF5040-8 | ME | 308 | 220 | 74 | 3 | 14 | 81 | 0 | 3 | 0 | 84 | 3 | 1.081 |
| AF5040-8 | ME | 303 | 249 | 84 | 1 | 7 | 74 | 14 | 4 | 0 | 92 | 18 | 1.078 |
| AF5044-21 | ME | 218 | 135 | 45 | 5 | 27 | 68 | 0 | 0 | 0 | 68 | 0 | 1.061 |
| AF5142-1 | ME | 166 | 136 | 46 | 3 | 9 | 56 | 8 | 24 | 0 | 88 | 32 | 1.062 |
| AF5152-2 | ME | 245 | 141 | 47 | 5 | 26 | 62 | 7 | 0 | 0 | 69 | 7 | 1.065 |
| AF5152-3 | ME | 194 | 97 | 33 | 3 | 14 | 49 | 21 | 13 | 0 | 83 | 33 | 1.068 |
| AF5153-11 | ME | 359 | 296 | 99 | 1 | 11 | 67 | 19 | 3 | 0 | 88 | 22 | 1.071 |
| AF5280-2 | ME | 251 | 177 | 59 | 1 | 11 | 68 | 13 | 7 | 0 | 88 | 19 | 1.064 |
| AF5281-4 | ME | 243 | 155 | 52 | 3 | 17 | 59 | 4 | 17 | 0 | 80 | 21 | 1.073 |
| AF5292-4 | ME | 437 | 402 | 135 | 1 | 3 | 62 | 17 | 17 | 0 | 96 | 34 | 1.068 |
| AF5332-2 | ME | 319 | 218 | 73 | 5 | 12 | 69 | 7 | 6 | 0 | 83 | 14 | 1.067 |
| AF5386-4 | ME | 355 | 292 | 98 | 0 | 4 | 77 | 18 | 0 | 0 | 96 | 18 | 1.081 |
| AF5387-2 | ME | 293 | 187 | 63 | 5 | 20 | 69 | 7 | 0 | 0 | 75 | 7 | 1.071 |
| AF5387-6 | ME | 294 | 200 | 67 | 6 | 18 | 61 | 12 | 3 | 0 | 75 | 14 | 1.061 |
| AF5392-8 | ME | 284 | 193 | 65 | 1 | 18 | 56 | 20 | 4 | 0 | 81 | 25 | 1.068 |
| AF5425-6 | ME | 275 | 208 | 70 | 3 | 16 | 72 | 3 | 6 | 0 | 81 | 8 | 1.075 |
| AF5426-3 | ME | 322 | 270 | 91 | 3 | 5 | 76 | 0 | 16 | 0 | 92 | 16 | 1.069 |
| AF5432-5 | ME | 403 | 337 | 113 | 2 | 13 | 72 | 2 | 11 | 0 | 86 | 13 | 1.060 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AF5445-4 | ME | 359 | 259 | 87 | 2 | 20 | 68 | 3 | 6 | 0 | 78 | 10 | 1.077 |
| AF5446-11 | ME | 411 | 337 | 113 | 1 | 4 | 41 | 35 | 20 | 0 | 95 | 55 | 1.073 |
| AF5447-10 | ME | 287 | 228 | 76 | 3 | 9 | 65 | 23 | 0 | 0 | 88 | 23 | 1.075 |
| AFW5039-1 | ME | 337 | 304 | 102 | 1 | 5 | 60 | 29 | 4 | 0 | 94 | 34 | 1.061 |
| B2827-12 | Beltsville | 204 | 105 | 35 | 5 | 36 | 53 | 0 | 6 | 0 | 59 | 6 | 1.068 |
| B2842-1 | Beltsville | 316 | 203 | 68 | 5 | 26 | 59 | 8 | 3 | 0 | 69 | 10 | 1.073 |
| B2842-1 | Beltsville | 234 | 129 | 43 | 9 | 33 | 56 | 2 | 0 | 0 | 58 | 2 | 1.072 |
| B2869-20 | Beltsville | 369 | 342 | 115 | 1 | 3 | 55 | 20 | 22 | 0 | 96 | 41 | 1.070 |
| B2869-20 | Beltsville | 329 | 281 | 94 | 1 | 9 | 63 | 19 | 7 | 0 | 90 | 27 | 1.064 |
| B2869-28 | Beltsville | 415 | 361 | 121 | 1 | 7 | 70 | 12 | 10 | 0 | 92 | 22 | 1.060 |
| B2869-29 | Beltsville | 382 | 331 | 111 | 1 | 10 | 75 | 8 | 6 | 0 | 89 | 14 | 1.075 |
| B2869-29 | Beltsville | 285 | 250 | 84 | 1 | 11 | 84 | 4 | 0 | 0 | 88 | 4 | 1.071 |
| B2883-11 | Beltsville | 336 | 249 | 83 | 3 | 13 | 62 | 19 | 3 | 0 | 83 | 22 | 1.073 |
| B2883-11 | Beltsville | 253 | 206 | 69 | 2 | 13 | 77 | 7 | 0 | 0 | 84 | 7 | 1.069 |
| B2883-16 | Beltsville | 212 | 122 | 41 | 4 | 19 | 71 | 3 | 3 | 0 | 77 | 6 | 1.065 |
| B2890-11 | Beltsville | 168 | 132 | 44 | 1 | 6 | 75 | 14 | 4 | 0 | 93 | 18 | 1.069 |
| B2895-8 | Beltsville | 287 | 189 | 63 | 3 | 19 | 72 | 4 | 3 | 0 | 79 | 7 | 1.071 |
| B2895-8 | Beltsville | 259 | 183 | 61 | 3 | 20 | 76 | 0 | 0 | 0 | 76 | 0 | 1.068 |
| B2904-2 | Beltsville | 388 | 317 | 106 | 3 | 11 | 64 | 10 | 12 | 0 | 86 | 22 | 1.069 |
| B2904-2 | Beltsville | 322 | 232 | 78 | 3 | 14 | 46 | 28 | 10 | 0 | 83 | 38 | 1.067 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B2908-3 | Beltsville | 216 | 145 | 49 | 3 | 23 | 75 | 0 | 0 | 0 | 75 | 0 | 1.063 |
| B2936-2 | Beltsville | 308 | 194 | 65 | 6 | 27 | 66 | 0 | 0 | 0 | 66 | 0 | 1.073 |
| B2936-2 | Beltsville | 301 | 181 | 61 | 9 | 28 | 59 | 5 | 0 | 0 | 63 | 5 | 1.077 |
| B2947-4 | Beltsville | 306 | 220 | 74 | 4 | 20 | 61 | 2 | 13 | 0 | 76 | 15 | 1.076 |
| B2947-4 | Beltsville | 321 | 246 | 83 | 2 | 20 | 64 | 5 | 9 | 0 | 78 | 14 | 1.075 |
| B2947-8 | Beltsville | 290 | 222 | 75 | 0 | 19 | 70 | 10 | 0 | 0 | 81 | 10 | 1.063 |
| B2947-8 | Beltsville | 275 | 216 | 73 | 1 | 19 | 78 | 0 | 2 | 0 | 80 | 2 | 1.064 |
| B2950-2 | Beltsville | 256 | 197 | 66 | 3 | 18 | 72 | 5 | 2 | 0 | 79 | 7 | 1.067 |
| B2950-2 | Beltsville | 259 | 201 | 67 | 1 | 9 | 67 | 8 | 14 | 0 | 89 | 22 | 1.068 |
| B2950-3 | Beltsville | 332 | 191 | 64 | 5 | 36 | 57 | 0 | 2 | 0 | 59 | 2 | 1.066 |
| B2950-3 | Beltsville | 293 | 157 | 53 | 5 | 38 | 58 | 0 | 0 | 0 | 58 | 0 | 1.067 |
| B2951-5 | Beltsville | 299 | 219 | 73 | 5 | 15 | 72 | 9 | 0 | 0 | 80 | 9 | 1.076 |
| B2951-5 | Beltsville | 281 | 201 | 67 | 3 | 17 | 75 | 5 | 0 | 0 | 80 | 5 | 1.074 |
| B2960-4 | Beltsville | 297 | 198 | 66 | 4 | 21 | 49 | 18 | 8 | 0 | 75 | 26 | 1.069 |
| B2960-4 | Beltsville | 268 | 167 | 56 | 2 | 16 | 60 | 5 | 16 | 0 | 82 | 22 | 1.063 |
| B2971-2 | Beltsville | 398 | 337 | 113 | 2 | 12 | 73 | 13 | 0 | 0 | 86 | 13 | 1.061 |
| B2981-3 | Beltsville | 282 | 164 | 55 | 3 | 37 | 60 | 0 | 0 | 0 | 60 | 0 | 1.067 |
| B2981-5 | Beltsville | 257 | 172 | 58 | 6 | 20 | 60 | 9 | 6 | 0 | 74 | 14 | 1.076 |
| B2993-6 | Beltsville | 203 | 115 | 39 | 7 | 19 | 51 | 20 | 2 | 0 | 73 | 22 | 1.057 |
| B2996-1 | Beltsville | 245 | 122 | 41 | 6 | 33 | 61 | 0 | 0 | 0 | 61 | 0 | 1.075 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B2999-6 | Beltsville | 292 | 145 | 48 | 6 | 40 | 45 | 4 | 6 | 0 | 54 | 9 | 1.071 |
| B3000-1 | Beltsville | 210 | 156 | 52 | 0 | 20 | 80 | 0 | 0 | 0 | 80 | 0 | 1.066 |
| B3002-1 | Beltsville | 318 | 275 | 92 | 2 | 5 | 48 | 33 | 12 | 0 | 93 | 45 | 1.065 |
| B3003-1 | Beltsville | 181 | 83 | 28 | 6 | 48 | 46 | 0 | 0 | 0 | 46 | 0 | 1.082 |
| B3003-10 | Beltsville | 245 | 125 | 42 | 7 | 35 | 58 | 0 | 0 | 0 | 58 | 0 | 1.074 |
| B3005-7 | Beltsville | 226 | 66 | 22 | 7 | 50 | 44 | 0 | 0 | 0 | 44 | 0 | 1.071 |
| B3005-9 | Beltsville | 167 | 41 | 14 | 14 | 37 | 50 | 0 | 0 | 0 | 50 | 0 | 1.066 |
| B3012-3 | Beltsville | 318 | 192 | 64 | 1 | 10 | 80 | 0 | 9 | 0 | 89 | 9 | 1.078 |
| B3012-7 | Beltsville | 315 | 170 | 57 | 5 | 32 | 63 | 0 | 0 | 0 | 63 | 0 | 1.069 |
| B3015-1 | Beltsville | 322 | 183 | 61 | 4 | 15 | 81 | 0 | 0 | 0 | 81 | 0 | 1.071 |
| BNC311-4 | Beltsville | 247 | 73 | 24 | 6 | 17 | 77 | 0 | 0 | 0 | 77 | 0 | 1.061 |
| BNC311-4 | Beltsville | 247 | 130 | 44 | 3 | 18 | 71 | 3 | 5 | 0 | 80 | 9 | 1.063 |
| BNC326-8 | Beltsville | 171 | 71 | 24 | 7 | 23 | 57 | 13 | 0 | 0 | 70 | 13 | 1.071 |
| BNC366-1 | Beltsville | 257 | 163 | 54 | 3 | 17 | 65 | 12 | 4 | 0 | 81 | 16 | 1.068 |
| BNC371-2 | Beltsville | 411 | 333 | 111 | 3 | 12 | 77 | 6 | 2 | 0 | 85 | 8 | 1.064 |
| CO05061-6W | CSU | 305 | 178 | 60 | 2 | 20 | 78 | 0 | 0 | 0 | 78 | 0 | 1.058 |
| CO05061-6W | CSU | 312 | 277 | 93 | 0 | 9 | 71 | 15 | 4 | 0 | 91 | 19 | 1.067 |
| CO07070-10W | CSU | 201 | 119 | 40 | 4 | 21 | 71 | 0 | 5 | 0 | 76 | 5 | 1.061 |
| CO07070-13W | CSU | 372 | 208 | 70 | 5 | 32 | 56 | 4 | 3 | 0 | 63 | 7 | 1.071 |
| COTX09022-5Ru/Y | CSU | 99 | 30 | 10 | 4 | 43 | 53 | 0 | 0 | 0 | 53 | 0 | 1.054 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H15-17 | Cornell | 339 | 135 | 45 | 2 | 19 | 75 | 4 | 0 | 0 | 79 | 4 | 1.066 |
| J104-3 | Cornell | 384 | 333 | 112 | 2 | 7 | 49 | 20 | 22 | 0 | 91 | 42 | 1.072 |
| J104-3 | Cornell | 359 | 276 | 93 | 2 | 9 | 62 | 13 | 14 | 0 | 89 | 27 | 1.065 |
| J105-10 | Cornell | 277 | 190 | 64 | 2 | 10 | 76 | 4 | 9 | 0 | 88 | 12 | 1.072 |
| J105-10 | Cornell | 292 | 225 | 75 | 1 | 13 | 74 | 2 | 9 | 0 | 86 | 11 | 1.071 |
| J112-2 | Cornell | 265 | 191 | 64 | 2 | 12 | 86 | 0 | 0 | 0 | 86 | 0 | 1.072 |
| J112-2 | Cornell | 323 | 241 | 81 | 2 | 17 | 73 | 9 | 0 | 0 | 81 | 9 | 1.073 |
| K27-1 | Cornell | 222 | 124 | 42 | 3 | 17 | 65 | 16 | 0 | 0 | 81 | 16 | 1.069 |
| K27-3 | Cornell | 287 | 152 | 51 | 3 | 39 | 57 | 0 | 0 | 0 | 57 | 0 | 1.070 |
| K28-18 | Cornell | 264 | 114 | 38 | 3 | 35 | 62 | 0 | 0 | 0 | 62 | 0 | 1.073 |
| K28-7 | Cornell | 378 | 292 | 98 | 1 | 19 | 78 | 0 | 2 | 0 | 80 | 2 | 1.070 |
| K31-4 | Cornell | 321 | 195 | 65 | 3 | 26 | 60 | 8 | 3 | 0 | 71 | 11 | 1.071 |
| MN07151WB-01 | MN | 222 | 156 | 52 | 2 | 24 | 73 | 0 | 0 | 0 | 73 | 0 | 1.067 |
| MN07151WB-01 | MN | 241 | 136 | 45 | 5 | 37 | 55 | 3 | 0 | 0 | 58 | 3 | 1.076 |
| MN07152WB-01 | MN | 285 | 189 | 63 | 4 | 18 | 73 | 4 | 3 | 0 | 79 | 6 | 1.072 |
| MN07152WB-01 | MN | 289 | 198 | 66 | 3 | 14 | 69 | 13 | 0 | 0 | 83 | 13 | 1.069 |
| MN07159WB-01 | MN | 248 | 117 | 39 | 5 | 43 | 46 | 6 | 0 | 0 | 52 | 6 | 1.069 |
| MN07159WB-01 | MN | 227 | 99 | 33 | 10 | 42 | 42 | 6 | 0 | 0 | 48 | 6 | 1.064 |
| MN07289BB-01 | MN | 209 | 100 | 34 | 6 | 41 | 54 | 0 | 0 | 0 | 54 | 0 | 1.073 |
| MN07330BB-01 | MN | 289 | 155 | 52 | 2 | 31 | 57 | 10 | 0 | 0 | 67 | 10 | 1.066 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MN08101BW-01 | MN | 245 | 149 | 50 | 7 | 21 | 61 | 12 | 0 | 0 | 73 | 12 | 1.065 |
| MN08102BW-01 | MN | 272 | 224 | 75 | 1 | 9 | 85 | 5 | 0 | 0 | 90 | 5 | 1.067 |
| MN08102BW-01 | MN | 357 | 307 | 103 | 2 | 8 | 82 | 8 | 0 | 0 | 90 | 8 | 1.074 |
| MN09059BB-01 | MN | 225 | 118 | 39 | 3 | 35 | 62 | 0 | 0 | 0 | 62 | 0 | 1.064 |
| MN11130PLWRGR-02 | MN | 74 | 47 | 16 | 5 | 31 | 64 | 0 | 0 | 0 | 64 | 0 | 1.066 |
| MN11136PLWRGR-10 | MN | 334 | 224 | 75 | 2 | 13 | 54 | 12 | 19 | 0 | 85 | 31 | 1.067 |
| MN11136PLWRGR-11 | MN | 268 | 113 | 38 | 7 | 36 | 57 | 0 | 0 | 0 | 57 | 0 | 1.063 |
| MN11142PLWRGR-01 | MN | 150 | 28 | 10 | 15 | 36 | 49 | 0 | 0 | 0 | 49 | 0 | 1.060 |
| MN11153PLWRGR-03 | MN | 96 | 42 | 14 | 8 | 38 | 41 | 0 | 13 | 0 | 54 | 13 | 1.066 |
| MN11158PLWRGR-01 | MN | 250 | 23 | 8 | 6 | 35 | 59 | 0 | 0 | 0 | 59 | 0 | 1.061 |
| MN11189PLWRGR-02 | MN | 128 | 78 | 26 | 6 | 17 | 77 | 0 | 0 | 0 | 77 | 0 | 1.059 |
| MSM246-B | MSU | 333 | 170 | 57 | 3 | 11 | 61 | 0 | 25 | 0 | 86 | 25 | 1.076 |
| MSM246-B | MSU | 316 | 260 | 87 | 2 | 12 | 64 | 11 | 12 | 0 | 86 | 23 | 1.085 |
| MSQ089-1 | MSU | 265 | 170 | 57 | 1 | 14 | 76 | 0 | 8 | 0 | 84 | 8 | 1.065 |
| MSQ089-1 | MSU | 300 | 212 | 71 | 1 | 4 | 34 | 15 | 36 | 10 | 84 | 50 | 1.062 |
| MSR061-1 | MSU | 324 | 178 | 60 | 3 | 21 | 76 | 0 | 0 | 0 | 76 | 0 | 1.065 |
| MSR061-1 | MSU | 345 | 287 | 96 | 3 | 10 | 71 | 9 | 7 | 0 | 87 | 16 | 1.069 |
| MSR127-2 | MSU | 333 | 243 | 82 | 5 | 15 | 71 | 8 | 0 | 0 | 79 | 8 | 1.069 |
| MSR127-2 | MSU | 359 | 291 | 98 | 3 | 13 | 72 | 4 | 8 | 0 | 85 | 12 | 1.073 |
| MSS428-2 | MSU | 254 | 106 | 35 | 7 | 29 | 64 | 0 | 0 | 0 | 64 | 0 | 1.069 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MSS428-2 | MSU | 300 | 185 | 62 | 2 | 17 | 71 | 10 | 0 | 0 | 81 | 10 | 1.074 |
| MST184-3 | MSU | 184 | 127 | 43 | 0 | 8 | 92 | 0 | 0 | 0 | 92 | 0 | 1.066 |
| MST184-3 | MSU | 263 | 191 | 64 | 3 | 11 | 77 | 10 | 0 | 0 | 87 | 10 | 1.070 |
| MST186-1Y | MSU | 289 | 184 | 62 | 3 | 21 | 68 | 0 | 8 | 0 | 76 | 8 | 1.060 |
| MST186-1Y | MSU | 310 | 228 | 76 | 1 | 17 | 82 | 0 | 0 | 0 | 82 | 0 | 1.064 |
| MST191-2Y | MSU | 347 | 210 | 70 | 3 | 21 | 73 | 3 | 0 | 0 | 76 | 3 | 1.061 |
| MST191-2Y | MSU | 365 | 249 | 83 | 2 | 22 | 73 | 0 | 3 | 0 | 76 | 3 | 1.064 |
| MST229-1 | MSU | 301 | 240 | 80 | 2 | 10 | 82 | 5 | 0 | 0 | 87 | 5 | 1.069 |
| MST443-1 | MSU | 169 | 91 | 31 | 2 | 20 | 78 | 0 | 0 | 0 | 78 | 0 | 1.064 |
| MSU088-1 | MSU | 266 | 146 | 49 | 1 | 14 | 69 | 12 | 5 | 0 | 85 | 16 | 1.067 |
| MSU245-1 | MSU | 227 | 105 | 35 | 3 | 33 | 64 | 0 | 0 | 0 | 64 | 0 | 1.080 |
| MSU379-1 | MSU | 298 | 170 | 57 | 4 | 20 | 69 | 7 | 0 | 0 | 76 | 7 | 1.071 |
| MSV016-2 | MSU | 310 | 198 | 66 | 2 | 24 | 74 | 0 | 0 | 0 | 74 | 0 | 1.072 |
| MSV030-4 | MSU | 227 | 125 | 42 | 7 | 35 | 59 | 0 | 0 | 0 | 59 | 0 | 1.071 |
| MSV030-4 | MSU | 220 | 131 | 44 | 4 | 32 | 64 | 0 | 0 | 0 | 64 | 0 | 1.073 |
| MSV093-1 | MSU | 396 | 274 | 92 | 3 | 13 | 64 | 15 | 5 | 0 | 84 | 20 | 1.057 |
| MSV111-1 | MSU | 266 | 143 | 48 | 6 | 31 | 63 | 0 | 0 | 0 | 63 | 0 | 1.062 |
| MSV241-2 | MSU | 369 | 323 | 108 | 2 | 9 | 80 | 4 | 4 | 0 | 89 | 9 | 1.094 |
| MSV292-1Y | MSU | 236 | 134 | 45 | 5 | 24 | 67 | 4 | 0 | 0 | 72 | 4 | 1.059 |
| MSV301-2 | MSU | 246 | 156 | 52 | 1 | 11 | 82 | 0 | 6 | 0 | 88 | 6 | 1.067 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MSV301-2 | MSU | 248 | 163 | 55 | 2 | 9 | 79 | 10 | 0 | 0 | 89 | 10 | 1.068 |
| MSV358-3 | MSU | 312 | 248 | 83 | 1 | 16 | 83 | 0 | 0 | 0 | 83 | 0 | 1.068 |
| MSV358-3 | MSU | 349 | 281 | 94 | 1 | 15 | 72 | 7 | 5 | 0 | 84 | 12 | 1.062 |
| MSV380-1 | MSU | 286 | 209 | 70 | 1 | 20 | 69 | 7 | 3 | 0 | 79 | 10 | 1.070 |
| MSV394-3 | MSU | 289 | 216 | 72 | 2 | 19 | 72 | 3 | 4 | 0 | 78 | 7 | 1.073 |
| MSV498-1 | MSU | 286 | 227 | 76 | 0 | 8 | 89 | 3 | 0 | 0 | 92 | 3 | 1.062 |
| MSV498-1 | MSU | 336 | 275 | 92 | 2 | 9 | 71 | 9 | 9 | 0 | 89 | 19 | 1.065 |
| MSV505-2 | MSU | 323 | 243 | 81 | 2 | 12 | 73 | 10 | 3 | 0 | 86 | 13 | 1.074 |
| MSV507-007 | MSU | 337 | 275 | 92 | 3 | 11 | 75 | 8 | 3 | 0 | 86 | 11 | 1.054 |
| MSV507-094 | MSU | 265 | 193 | 65 | 4 | 16 | 76 | 4 | 0 | 0 | 79 | 4 | 1.062 |
| MSV507-100 | MSU | 333 | 264 | 88 | 2 | 11 | 82 | 4 | 0 | 0 | 87 | 4 | 1.073 |
| MSV507-128 | MSU | 258 | 202 | 68 | 2 | 12 | 80 | 6 | 0 | 0 | 86 | 6 | 1.076 |
| MSV507-143 | MSU | 388 | 293 | 98 | 2 | 12 | 68 | 9 | 10 | 0 | 86 | 19 | 1.075 |
| MSV507-146 | MSU | 327 | 160 | 54 | 2 | 20 | 62 | 3 | 13 | 0 | 78 | 16 | 1.062 |
| MSV507-198 | MSU | 297 | 214 | 72 | 3 | 8 | 82 | 0 | 7 | 0 | 90 | 7 | 1.078 |
| MSW075-1 | MSU | 293 | 212 | 71 | 4 | 21 | 72 | 0 | 4 | 0 | 75 | 4 | 1.072 |
| MSW138-2 | MSU | 344 | 288 | 96 | 1 | 11 | 78 | 5 | 5 | 0 | 88 | 10 | 1.068 |
| MSW168-2 | MSU | 376 | 292 | 98 | 2 | 9 | 42 | 21 | 26 | 0 | 90 | 48 | 1.084 |
| MSW259-6 | MSU | 396 | 313 | 105 | 2 | 11 | 52 | 11 | 24 | 0 | 88 | 35 | 1.063 |
| MSW259-6 | MSU | 401 | 279 | 93 | 3 | 11 | 59 | 16 | 12 | 0 | 86 | 27 | 1.067 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MSW293-1 | MSU | 337 | 267 | 90 | 1 | 9 | 70 | 10 | 10 | 0 | 90 | 20 | 1.063 |
| MSW474-1 | MSU | 284 | 194 | 65 | 3 | 28 | 70 | 0 | 0 | 0 | 70 | 0 | 1.063 |
| MSW485-2 | MSU | 341 | 281 | 94 | 2 | 16 | 73 | 7 | 2 | 0 | 83 | 9 | 1.072 |
| MSW485-2 | MSU | 368 | 278 | 93 | 2 | 17 | 65 | 11 | 5 | 0 | 81 | 16 | 1.073 |
| MSX150-1 | MSU | 444 | 379 | 127 | 3 | 10 | 71 | 10 | 6 | 0 | 88 | 16 | 1.075 |
| MSX240-3 | MSU | 324 | 261 | 87 | 1 | 12 | 85 | 2 | 0 | 0 | 87 | 2 | 1.062 |
| MSX245-2Y | MSU | 408 | 356 | 119 | 1 | 9 | 59 | 15 | 16 | 0 | 90 | 31 | 1.068 |
| MSX540-4 | MSU | 367 | 276 | 92 | 1 | 12 | 74 | 6 | 7 | 0 | 87 | 13 | 1.068 |
| MSX542-2 | MSU | 372 | 308 | 103 | 1 | 5 | 70 | 19 | 5 | 0 | 94 | 23 | 1.082 |
| NC302-12 | NC | 236 | 144 | 48 | 3 | 22 | 75 | 0 | 0 | 0 | 75 | 0 | 1.056 |
| NC311-9 | NC | 297 | 218 | 73 | 3 | 18 | 71 | 8 | 0 | 0 | 78 | 8 | 1.058 |
| NC317-12 | NC | 232 | 138 | 46 | 5 | 26 | 50 | 7 | 12 | 0 | 69 | 19 | 1.070 |
| NCJ100-7 | NC | 248 | 134 | 45 | 5 | 19 | 56 | 15 | 5 | 0 | 76 | 20 | 1.055 |
| NCJ106-2 | NC | 217 | 110 | 37 | 8 | 22 | 70 | 0 | 0 | 0 | 70 | 0 | 1.071 |
| NCJ107-6 | NC | 131 | 57 | 19 | 3 | 22 | 65 | 9 | 0 | 0 | 75 | 9 | 1.058 |
| ND7799c-1 | NDSU | 92 | 46 | 15 | 3 | 12 | 85 | 0 | 0 | 0 | 85 | 0 | 1.057 |
| ND7799c-1 | NDSU | 146 | 21 | 7 | 13 | 49 | 38 | 0 | 0 | 0 | 38 | 0 | 1.047 |
| NDTX060700C-1W | TAMU | 200 | 76 | 26 | 10 | 49 | 42 | 0 | 0 | 0 | 42 | 0 | 1.076 |
| NDTX060700C-1W | TAMU | 215 | 114 | 38 | 5 | 39 | 57 | 0 | 0 | 0 | 57 | 0 | 1.064 |
| NDTX071109C-1W | TAMU | 302 | 246 | 82 | 1 | 9 | 61 | 19 | 10 | 0 | 89 | 29 | 1.051 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NDTX081644CAB-2W | TAMU | 260 | 120 | 40 | 7 | 45 | 48 | 0 | 0 | 0 | 48 | 0 | 1.059 |
| NDTX081648CB-13W | TAMU | 251 | 131 | 44 | 4 | 21 | 59 | 17 | 0 | 0 | 75 | 17 | 1.066 |
| NDTX081648CB-13W | TAMU | 201 | 135 | 45 | 2 | 14 | 69 | 5 | 10 | 0 | 84 | 15 | 1.058 |
| NDTX091908AB-2W | TAMU | 338 | 205 | 69 | 4 | 25 | 62 | 8 | 0 | 0 | 71 | 8 | 1.061 |
| NDTX091908AB-2W | TAMU | 343 | 220 | 74 | 4 | 28 | 65 | 2 | 0 | 0 | 68 | 2 | 1.055 |
| NDTX102462C-6W | TAMU | 290 | 126 | 42 | 7 | 42 | 48 | 4 | 0 | 0 | 51 | 4 | 1.072 |
| NDTX102514ABC-5W | TAMU | 248 | 103 | 35 | 12 | 44 | 44 | 0 | 0 | 0 | 44 | 0 | 1.052 |
| NDTX102557-1W | TAMU | 257 | 103 | 35 | 4 | 48 | 45 | 3 | 0 | 0 | 48 | 3 | 1.063 |
| NY152(H15-5) | Cornell | 276 | 105 | 35 | 2 | 29 | 69 | 0 | 0 | 0 | 69 | 0 | 1.072 |
| NY152(H15-5) | Cornell | 405 | 280 | 94 | 2 | 19 | 76 | 3 | 0 | 0 | 79 | 3 | 1.068 |
| NY153(H25-4) | Cornell | 296 | 203 | 68 | 1 | 8 | 80 | 11 | 0 | 0 | 91 | 11 | 1.067 |
| NY153(H25-4) | Cornell | 301 | 223 | 75 | 2 | 12 | 69 | 12 | 6 | 0 | 87 | 18 | 1.071 |
| NYWJ107-5 | UW | 366 | 310 | 104 | 1 | 4 | 55 | 18 | 23 | 0 | 96 | 41 | 1.052 |
| NYWJ11-5 | UW | 361 | 288 | 97 | 1 | 7 | 67 | 18 | 6 | 0 | 92 | 25 | 1.077 |
| NYWJ11-5 | UW | 442 | 381 | 127 | 1 | 5 | 58 | 15 | 21 | 0 | 94 | 36 | 1.080 |
| TX09396-1W | TXAM | 332 | 298 | 100 | 1 | 5 | 62 | 19 | 13 | 0 | 94 | 32 | 1.072 |
| TX09396-1W | TXAM | 450 | 396 | 133 | 0 | 5 | 60 | 13 | 17 | 4 | 91 | 30 | 1.058 |
| TX09403-14W | TXAM | 274 | 183 | 61 | 4 | 25 | 69 | 2 | 0 | 0 | 71 | 2 | 1.065 |
| W10670-3(QSW102-3) | UW | 152 | 72 | 24 | 6 | 41 | 53 | 0 | 0 | 0 | 53 | 0 | 1.067 |
| W10670-3(QSW102-3) | UW | 192 | 123 | 41 | 4 | 26 | 69 | 0 | 0 | 0 | 69 | 0 | 1.066 |

Table 24 (cont'd). Production statistics for the 2014 USPB National Chip Processing Board Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W6822-3 | UW | 314 | 203 | 68 | 2 | 23 | 56 | 12 | 7 | 0 | 75 | 19 | 1.070 |
| W6822-3 | UW | 340 | 288 | 96 | 1 | 12 | 74 | 7 | 5 | 0 | 87 | 13 | 1.053 |
| W9200-13 | UW | 287 | 218 | 73 | 1 | 20 | 67 | 7 | 5 | 0 | 79 | 13 | 1.069 |
| W9200-13 | UW | 294 | 212 | 71 | 1 | 25 | 74 | 0 | 0 | 0 | 74 | 0 | 1.072 |
| W9306-1 | UW | 164 | 94 | 31 | 0 | 23 | 59 | 12 | 5 | 0 | 76 | 17 | 1.057 |
| W9306-1 | UW | 270 | 196 | 66 | 3 | 19 | 62 | 16 | 0 | 0 | 78 | 16 | 1.059 |
| W9827-7 | UW | 208 | 98 | 33 | 6 | 43 | 51 | 0 | 0 | 0 | 51 | 0 | 1.054 |
| W9835-1 | UW | 272 | 162 | 54 | 4 | 17 | 63 | 8 | 8 | 0 | 79 | 16 | 1.061 |
| W9835-2 | UW | 322 | 222 | 74 | 4 | 15 | 63 | 14 | 4 | 0 | 80 | 17 | 1.051 |
| W9869-1 | UW | 346 | 294 | 98 | 2 | 7 | 51 | 19 | 21 | 0 | 91 | 40 | 1.058 |
| W9871-4 | UW | 393 | 346 | 116 | 1 | 5 | 67 | 12 | 14 | 0 | 93 | 26 | 1.072 |
| W9871-6 | UW | 416 | 301 | 101 | 2 | 20 | 63 | 0 | 15 | 0 | 78 | 15 | 1.053 |
| W9874-3 | UW | 355 | 245 | 82 | 3 | 20 | 67 | 3 | 6 | 0 | 77 | 10 | 1.073 |
| W9891-1 | UW | 335 | 246 | 82 | 3 | 12 | 53 | 15 | 17 | 0 | 85 | 32 | 1.066 |
| W9905-3 | UW | 298 | 197 | 66 | 2 | 15 | 63 | 3 | 16 | 0 | 82 | 20 | 1.055 |
| W9905-6 | UW | 267 | 138 | 46 | 7 | 28 | 49 | 12 | 4 | 0 | 65 | 16 | 1.054 |
| W9905-7 | UW | 303 | 207 | 69 | 6 | 23 | 61 | 4 | 6 | 0 | 72 | 10 | 1.059 |
| W9922-5 | UW | 331 | 249 | 83 | 3 | 15 | 70 | 7 | 4 | 0 | 82 | 11 | 1.063 |
| W9967-16 | UW | 303 | 167 | 56 | 4 | 37 | 59 | 0 | 0 | 0 | 59 | 0 | 1.074 |
| W9967-4 | UW | 285 | 175 | 59 | 3 | 34 | 63 | 0 | 0 | 0 | 63 | 0 | 1.064 |
| W9967-5 | UW | 324 | 255 | 85 | 2 | 11 | 84 | 3 | 0 | 0 | 87 | 3 | 1.070 |
| W9968-2 | UW | 314 | 239 | 80 | 3 | 5 | 79 | 7 | 6 | 0 | 92 | 13 | 1.053 |
| W9968-3 | UW | 228 | 149 | 50 | 4 | 23 | 67 | 7 | 0 | 0 | 74 | 7 | 1.060 |
| W9968-5 | UW | 397 | 347 | 116 | 0 | 6 | 80 | 6 | 9 | 0 | 94 | 14 | 1.083 |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

Table 25. Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| Atlantic | 100 | 7 | 9-6 | 1 | 2 | 2 | 2 | 6 | 1 | 2 |
| Atlantic | 100 | 8 | 6-9 | 1 | 2 | 1-2 | 3 | 5 | 1 | 1 |
| Atlantic | 100 | 7 | 8-5 | 1 | 2 | 2 | 2 | 6 | 1 | 2 |
| Atlantic | 100 | 7 | 6-9 | 1 | 2 | 1 | 2 | 6 | 1 | 2 |
| Atlantic | 100 | 8 | 9-6 | 1 | 2 | 2 | 3 | 5 | 1 | 2 |
| Elkton | 100 | 8 | 6 | 2 | 2 | 2 | 2 | 7 | 1 | 1 |
| Elkton | 100 | 9 | 6 | 2 | 2 | 2 | 2 | 7 | 1 | 1 |
| Elkton | 100 | 8 | 5 | 2 | 1 | 2 | 2 | 6 | 1 | 1 |
| Elkton | 100 | 7 | 5 | 2 | 1 | 2 | 2 | 8 | 1 | 0 |
| Elkton | 100 | 8 | 6 | 2 | 2 | 2 | 2 | 7 | 1 | 1 |
| Harley Blackwell | 100 | 8 | 8-5 | 1 | 1 | 2 | 2 | 7 | 1 | 2 |
| Harley Blackwell | 100 | 9 | 5-6 | 1 | 2 | 1 | 2 | 7 | 2 | 2 |
| Harley Blackwell | 100 | 9 | 5 | 1 | 1 | 1-2 | 2 | 6 | 1 | 2 |
| Harley Blackwell | 100 | 9 | 8 | 1 | 1 | 1 | 2 | 7 | 1 | 3 |
| Harley Blackwell | 100 | 9 | 8 | 1 | 1 | 1-2 | 2 | 8 | 1 | 2 |
| Marcy | 100 | 7 | 9-6 | 1 | 1 | 2 | 3 | 5 | 2 | 2 |
| Marcy | 100 | 7 | 8-5 | 1 | 1 | 2 | 3 | 5 | 1 | 2 |
| Marcy | 100 | 7 | 8 | 1 | 1 | 2 | 2 | 8 | 1 | 1 |
| Marcy | 100 | 6 | 8 | 1 | 2 | 2 | 2 | 7 | 1 | 0 |
| Marcy | 100 | 7 | 8 | 1 | 1 | 2 | 3 | 5 | 1 | 1 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| Snowden | 100 | 8 | 8 | 1 | 1 | 1 | 2 | 6 | 1 | 1 |
| Snowden | 100 | 8 | 8-5 | 1 | 1 | 1 | 2 | 7 | 1 | 1 |
| Snowden | 100 | 7 | 8 | 2 | 1 | 1-2 | 3 | 6 | 1 | 1 |
| Snowden | 100 | 8 | 8 | 1 | 1 | 1 | 3 | 5 | 1 | 2 |
| Snowden | 100 | 8 | 8 | 2 | 1 | 1 | 2 | 7 | 2 | 2 |
| AC01144-1W | 100 | 9 | 5-8 | 1 | 1 | 2 | 4 | 5 | 1 | 3 |
| AC08094-2W | 100 | 8 | 5 | 1 | 2 | 1 | 4 | 6 | 1 | 2 |
| AF4386-16 | 100 | 8 | 9 | 2 | 1 | 1-2 | 2 | 6 | 1 | 2 |
| AF4386-16 | 100 | 8 | 6-9 | 1 | 1 | 1-2 | 3 | 6 | 1 | 1 |
| AF4442-4 | 100 | 6 | 8 | 1 | 1 | 2 | 3 | 5 | 2 | 1 |
| AF4442-4 | 100 | 6 | 8 | 1 | 2 | 2 | 4 | 4 | 2 | 1 |
| AF4552-5 | 100 | 7 | 8-9 | 1 | 1 | 1 | 3 | 5 | 2 | 2 |
| AF4552-5 | 100 | 7 | 8-5 | 1 | 1 | 1 | 3 | 6 | 2 | 3 |
| AF4648-2 | 100 | 6 | 9-6 | 2 | 1 | 2 | 2 | 5 | 1 | 1 |
| AF4648-2 | 100 | 7 | 6-9 | 2 | 1 | 2 | 2 | 6 | 1 | 1 |
| AF4971-3 | 100 | 7 | 9-6 | 2 | 1 | 1-2 | 2 | 5 | 1 | 2 |
| AF4975-3 | 100 | 8 | 8-5 | 1 | 2 | 1 | 3 | 5 | 2 | 2 |
| AF4975-3 | 100 | 8 | 6-9 | 1 | 1 | 1-2 | 4 | 4 | 2 | 2 |
| AF5033-11 | 100 | 8 | 5 | 2 | 1 | 2 | 4 | 6 | 1 | 1 |
| AF5033-13 | 100 | 7 | 5-8 | 1 | 1 | 1-2 | 2 | 5 | 1 | 1 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| AF5039-11 | 100 | 8 | 5 | 1 | 3 | 2 | 3 | 5 | 2 | 2 |
| AF5039-15 | 100 | 9 | 5 | 1 | 2 | 2 | 4 | 6 | 3 | 3 |
| AF5040-8 | 100 | 8 | 8-5 | 1 | 3 | 2 | 2 | 5 | 1 | 2 |
| AF5040-8 | 100 | 8 | 9 | 1 | 2 | 1 | 2 | 5 | 1 | 1 |
| AF5044-21 | 80 | 8 | 8-5 | 1 | 2 | 2 | 4 | 5 | 1 | 1 |
| AF5142-1 | 40 | 7 | 5-6 | 1 | 4 | 2 | 4 | 4 | 2 | 1 |
| AF5152-2 | 100 | 8 | 8-5 | 1 | 1 | 2 | 4 | 4 | 1 | 3 |
| AF5152-3 | 100 | 8 | 8 | 1 | . | . | 3 | . | 1 | 2 |
| AF5153-11 | 100 | 8 | 8-5 | 1 | 4 | 2 | 2 | 6 | 1 | 1 |
| AF5280-2 | 100 | 8 | 8-5 | 1 | 1 | 2 | 4 | 5 | 2 | 3 |
| AF5281-4 | 100 | 8 | 8-5 | 1 | 1 | 1 | 3 | 4 | 1 | 2 |
| AF5292-4 | 100 | 7 | 6 | 1 | 2 | 2 | 2 | 6 | 1 | 1 |
| AF5332-2 | 100 | 7 | 9-6 | 1 | 3 | 2 | 3 | 4 | 2 | 2 |
| AF5386-4 | 100 | 8 | 5 | 1 | 1 | 1-2 | 2 | 5 | 2 | 1 |
| AF5387-2 | 100 | 7 | 6 | 1 | 1 | 2 | 3 | 5 | 2 | 3 |
| AF5387-6 | 100 | 7 | 5 | 1 | 1 | 1 | 3 | 6 | 1 | 1 |
| AF5392-8 | 100 | 7 | 5 | 1 | 4 | 2 | 4 | 3 | 2 | 2 |
| AF5425-6 | 100 | 7 | 8-5 | 1 | 2 | 2 | 2 | 6 | 1 | 1 |
| AF5426-3 | 100 | 6 | 8-9 | 1 | 1 | 2 | 3 | 6 | 2 | 2 |
| AF5432-5 | 100 | 9 | 5 | 2 | 2 | 2 | 4 | 6 | 2 | 3 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| AF5445-4 | 100 | 8 | 5-6 | 1 | 1 | 2 | 2 | 6 | 1 | 2 |
| AF5446-11 | 100 | 7 | 8 | 1 | 1 | 2 | 2 | 4 | 1 | 2 |
| AF5447-10 | 100 | 8 | 8 | 1 | 3 | 1-2 | 2 | 7 | 2 | 1 |
| AFW5039-1 | 100 | 9 | 8 | 1 | 4 | 2 | 3 | 7 | 1 | 1 |
| B2827-12 | 100 | 8 | 8-5 | 1 | - | - | 4 | - | 2 | 1 |
| B2842-1 | 100 | 8 | 6 | 1 | 4 | 2 | 4 | 4 | 2 | 2 |
| B2842-1 | 100 | 9 | 8 | 1 | 3 | 1 | 4 | 5 | 2 | 3 |
| B2869-20 | 100 | 7 | 8-5 | 2 | 1 | 2 | 3 | 5 | 2 | 1 |
| B2869-20 | 100 | 8 | 7-8 | 2 | 1 | 2 | 3 | 5 | 2 | 1 |
| B2869-28 | 100 | 8 | 5-8 | 1 | 1 | 2 | 4 | 7 | 2 | 2 |
| B2869-29 | 100 | 9 | 5 | 1 | 1 | 1-2 | 2 | 5 | 2 | 1 |
| B2869-29 | 100 | 8 | 5-3 | 1 | 1 | 1 | 3 | 5 | 2 | 2 |
| B2883-11 | 100 | 8 | 9-6 | 1 | 1 | 2 | 3 | 6 | 2 | 2 |
| B2883-11 | 100 | 7 | 6-9 | 1 | 1 | 2 | 3 | 5 | 2 | 2 |
| B2883-16 | 100 | 7 | 5-6 | 1 | - | - | 4 | - | 2 | 2 |
| B2890-11 | 100 | 7 | 8-9 | 1 | 2 | 1-2 | 4 | 6 | 2 | 2 |
| B2895-8 | 100 | 8 | 5-8 | 1 | 1 | 2 | 3 | 6 | 1 | 2 |
| B2895-8 | 100 | 7 | 5 | 1 | 1 | 1-2 | 3 | 5 | 1 | 2 |
| B2904-2 | 100 | 8 | 8-5 | 1 | 1 | 1-2 | 3 | 5 | 1 | 1 |
| B2904-2 | 100 | 8 | 8-5 | 1 | 1 | 1 | 4 | 5 | 2 | 2 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| B2908-3 | 100 | 5 | 7-8 | 2 | 2 | 2 | 4 | 5 | 2 | 1 |
| B2936-2 | 100 | 9 | 5-6 | 2 | 4 | 2 | 4 | 5 | 2 | 2 |
| B2936-2 | 100 | 9 | 8-5 | 2 | 4 | 2 | 4 | 5 | 2 | 3 |
| B2947-4 | 100 | 7 | 5-6 | 1 | 1 | 2 | 3 | 6 | 2 | 2 |
| B2947-4 | 100 | 7 | 6-9 | 1 | 2 | 2 | 4 | 7 | 2 | 1 |
| B2947-8 | 100 | 7 | 5 | 1 | 1 | 1-2 | 4 | 5 | 1 | 2 |
| B2947-8 | 100 | 7 | 6 | 1 | 1 | 2 | 4 | 5 | 1 | 2 |
| B2950-2 | 100 | 8 | 8-9 | 1 | 1 | 2 | 3 | 7 | 1 | 1 |
| B2950-2 | 100 | 8 | 6-9 | 1 | 1 | 2 | 3 | 4 | 1 | 1 |
| B2950-3 | 100 | 8 | 5 | 1 | 1 | 2 | 3 | 5 | 1 | 1 |
| B2950-3 | 100 | 8 | 5 | 2 | 1 | 2 | 3 | 7 | 2 | 1 |
| B2951-5 | 100 | 7 | 6-9 | 1 | 2 | 2 | 3 | 5 | 1 | 2 |
| B2951-5 | 100 | 7 | 9-6 | 1 | 2 | 2 | 3 | 4 | 2 | 1 |
| B2960-4 | 100 | 8 | 8-5 | 2 | 2 | 2 | 3 | 5 | 2 | 1 |
| B2960-4 | 100 | 9 | 5-8 | 2 | 1 | 2 | 4 | 5 | 2 | 2 |
| B2971-2 | 100 | 8 | 5-8 | 1 | 1 | 2 | 3 | 6 | 2 | 1 |
| B2981-3 | 100 | 8 | 6 | 1 | 1 | 2 | 3 | 7 | 1 | 1 |
| B2981-5 | 100 | 7 | 6 | 1 | 1 | 1-2 | 3 | 4 | 1 | 2 |
| B2993-6 | 100 | 7 | 5 | 1 | 1 | 2 | 4 | 4 | 1 | 2 |
| B2996-1 | 100 | 8 | 5-6 | 1 | 1 | 2 | 4 | 4 | 2 | 3 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| B2999-6 | 100 | 8 | 8-5 | 1 | 1 | 2 | 3 | 6 | 2 | 2 |
| B3000-1 | 100 | 8 | 6 | 1 | 1 | 2 | 3 | 6 | 1 | 2 |
| B3002-1 | 100 | 8 | 6 | 1 | 1 | 2 | 3 | 6 | 1 | 1 |
| B3003-1 | 100 | 8 | 5 | 1 | 2 | 2 | 3 | 6 | 1 | 0 |
| B3003-10 | 100 | 8 | 6-3 | 1 | 3 | 2 | 3 | 5 | 1 | 1 |
| B3005-7 | 100 | 8 | 6 | 1 | 1 | 2 | 3 | 5 | 1 | 2 |
| B3005-9 | 100 | 8 | 8-9 | 1 | 1 | 2 | 4 | 5 | 2 | 1 |
| B3012-3 | 100 | 7 | 6 | 1 | 2 | 1-2 | 2 | 5 | 1 | 2 |
| B3012-7 | 100 | 7 | 5-2 | 1 | 2 | 2 | 3 | 6 | 1 | 2 |
| B3015-1 | 100 | 8 | 8-5 | 1 | 2 | 2 | 2 | 7 | 2 | 1 |
| BNC311-4 | 100 | 7 | 8-5 | 1 | 1 | 3 | 4 | 5 | 1 | 1 |
| BNC311-4 | 100 | 7 | 8-5 | 1 | 1 | 1-2 | 4 | 6 | 1 | 2 |
| BNC326-8 | 100 | 7 | 8-9 | 1 | 2 | 1-2 | 4 | 5 | 2 | 2 |
| BNC366-1 | 100 | 7 | 6-9 | 1 | 1 | 2 | 3 | 4 | 1 | 1 |
| BNC371-2 | 100 | 8 | 5-6 | 2 | 2 | 2 | 3 | 6 | 1 | 1 |
| CO05061-6W | 100 | 9 | 8 | 1 | 1 | 1-2 | 4 | 7 | 1 | 3 |
| CO05061-6W | 100 | 8 | 5-6 | 1 | 1 | 1 | 3 | 7 | 2 | 2 |
| CO07070-10W | 100 | 9 | 5 | 1 | 2 | 2 | 4 | 5 | 1 | 2 |
| CO07070-13W | 100 | 9 | 5 | 1 | 2 | 2 | 3 | 5 | 1 | 0 |
| COTX09022-5Ru/Y | 100 | 9 | 5-8 | 1 | - | - | 4 | - | 2 | 3 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| H15-17 | 100 | 8 | 9-6 | 1 | 2 | 2 | 3 | 5 | 1 | 2 |
| J104-3 | 100 | 7 | 9-6 | 1 | 1 | 1 | 3 | 5 | 1 | 2 |
| J104-3 | 100 | 7 | 6 | 1 | 1 | 1 | 3 | 5 | 1 | 2 |
| J105-10 | 100 | 8 | 5 | 1 | 2 | 2 | 2 | 6 | 1 | 1 |
| J105-10 | 100 | 8 | 9-6 | 1 | 2 | 1-2 | 3 | 4 | 1 | 1 |
| J112-2 | 100 | 8 | 5-8 | 1 | 2 | 2 | 3 | 6 | 1 | 1 |
| J112-2 | 100 | 9 | 5-8 | 1 | 2 | 2 | 2 | 6 | 2 | 1 |
| K27-1 | 100 | 8 | 6-9 | 1 | 1 | 2 | 3 | 5 | 1 | 1 |
| K27-3 | 100 | 9 | 6 | 1 | 2 | 2 | 3 | 6 | 1 | 1 |
| K28-18 | 100 | 8 | 9 | 1 | 1 | 2 | 4 | 5 | 1 | 2 |
| K28-7 | 100 | 8 | 6-9 | 1 | 1 | 2 | 3 | 7 | 1 | 1 |
| K31-4 | 100 | 8 | 9-6 | 1 | 2 | 2 | 3 | 5 | 1 | 1 |
| MN07151WB-01 | 100 | 7 | 5-8 | 1 | 1 | 1-2 | 3 | 6 | 1 | 1 |
| MN07151WB-01 | 100 | 8 | 9-6 | 1 | 1 | 1-2 | 3 | 6 | 1 | 1 |
| MN07152WB-01 | 100 | 8 | 8-5 | 1 | 2 | 2 | 3 | 6 | 1 | 2 |
| MN07152WB-01 | 100 | 9 | 8 | 1 | 2 | 2 | 4 | 5 | 2 | 2 |
| MN07159WB-01 | 100 | 8 | 5 | 1 | 2 | 2 | 3 | 6 | 1 | 1 |
| MN07159WB-01 | 100 | 7 | 5 | 1 | 1 | 1-2 | 4 | 6 | 2 | 1 |
| MN07289BB-01 | 100 | 8 | 4-7 | 1 | 1 | 2 | 3 | 6 | 1 | 1 |
| MN07330BB-01 | 100 | 9 | 5 | 1 | 1 | 1 | 3 | 6 | 2 | 1 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| MN08101BW-01 | 100 | 8 | 5 | 1 | 2 | 2 | 4 | 5 | 1 | 1 |
| MN08102BW-01 | 100 | 8 | 5-8 | 1 | 1 | 1-2 | 3 | 6 | 1 | 2 |
| MN08102BW-01 | 100 | 8 | 8-5 | 1 | 2 | 1 | 2 | 7 | 2 | 2 |
| MN09059BB-01 | 100 | 9 | 4-5 | 1 | 1 | 2 | 4 | 6 | 1 | 1 |
| MN11130PLWRGR-02 | 100 | 7 | 6-9 | 1 | 4 | 1 | 3 | 6 | 1 | 1 |
| MN11136PLWRGR-10 | 100 | 8 | 6 | 1 | 2 | 2 | 3 | 7 | 1 | 2 |
| MN11136PLWRGR-11 | 100 | 8 | 5-3 | 1 | 1 | 2 | 4 | 6 | 1 | 1 |
| MN11142PLWRGR-01 | 100 | 8 | 6 | 1 | 2 | 2 | 4 | 4 | 1 | 1 |
| MN11153PLWRGR-03 | 100 | 7 | 5 | 1 | 1 | 2 | 3 | 5 | 1 | 0 |
| MN11158PLWRGR-01 | 100 | 9 | 5-6 | 1 | 1 | 2 | 4 | 4 | 1 | 0 |
| MN11189PLWRGR-02 | 100 | 7 | 8-9 | 1 | - | - | 4 | - | 2 | 2 |
| MSM246-B | 100 | 9 | 8 | 1 | 2 | 1 | 3 | 4 | 1 | 0 |
| MSM246-B | 100 | 8 | 5-8 | 1 | 2 | 1 | 3 | 5 | 2 | 1 |
| MSQ089-1 | 100 | 8 | 8-5 | 1 | 2 | 1 | 4 | 6 | 2 | 2 |
| MSQ089-1 | 100 | 8 | 8-5 | 1 | 1 | 1 | 4 | 3 | 2 | 2 |
| MSR061-1 | 100 | 9 | 5-6 | 1 | 2 | 1-2 | 4 | 6 | 2 | 1 |
| MSR061-1 | 100 | 9 | 5-8 | 1 | 2 | 2 | 2 | 6 | 2 | 1 |
| MSR127-2 | 100 | 8 | 5-6 | 1 | 2 | 1-2 | 2 | 5 | 1 | 0 |
| MSR127-2 | 100 | 8 | 5-6 | 2 | 1 | 1-2 | 2 | 7 | 1 | 1 |
| MSS428-2 | 100 | 9 | 5 | 1 | 1 | 1 | 3 | 5 | 1 | 1 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| MSS428-2 | 100 | 9 | 5-6 | 1 | 1 | 2 | 3 | 6 | 2 | 3 |
| MST184-3 | 100 | 8 | 5 | 1 | 2 | 2 | 4 | 5 | 2 | 1 |
| MST184-3 | 100 | 8 | 5-8 | 1 | 1 | 2 | 3 | 5 | 1 | 0 |
| MST186-1Y | 100 | 7 | 6-3 | 1 | 4 | 1-2 | 4 | 6 | 2 | 2 |
| MST186-1Y | 100 | 7 | 6 | 1 | 3 | 1-2 | 4 | 7 | 1 | 1 |
| MST191-2Y | 100 | 7 | 5-6 | 1 | 3 | 2 | 4 | 6 | 2 | 1 |
| MST191-2Y | 100 | 8 | 6 | 1 | 4 | 2 | 4 | 7 | 2 | 2 |
| MST229-1 | 100 | 7 | 8-5 | 1 | 2 | 1-2 | 2 | 6 | 2 | 2 |
| MST443-1 | 100 | 8 | 5 | 1 | 4 | 1-2 | 4 | 5 | 1 | 1 |
| MSU088-1 | 100 | 7 | 6-9 | 1 | 2 | 1 | 4 | 4 | 2 | 2 |
| MSU245-1 | 100 | 9 | 8-9 | 1 | 2 | 2 | 3 | 6 | 1 | 1 |
| MSU379-1 | 100 | 8 | 5 | 1 | 1 | 2 | 4 | 4 | 1 | 1 |
| MSV016-2 | 100 | 9 | 8-9 | 1 | 1 | 2 | 3 | 6 | 2 | 1 |
| MSV030-4 | 100 | 7 | 5-6 | 1 | 1 | 1-2 | 3 | 6 | 1 | 2 |
| MSV030-4 | 100 | 7 | 6 | 1 | 1 | 2 | 3 | 6 | 1 | 2 |
| MSV093-1 | 100 | 9 | 5 | 1 | 4 | 1-2 | 4 | 5 | 2 | 1 |
| MSV111-1 | 100 | 8 | 8-5 | 1 | 1 | 1 | 4 | 5 | 2 | 3 |
| MSV241-2 | 100 | 8 | 5-8 | 2 | 2 | 2 | 1 | 6 | 1 | 1 |
| MSV292-1Y | 100 | 8 | 5 | 1 | 3 | 2 | 4 | 4 | 2 | 1 |
| MSV301-2 | 100 | 8 | 5 | 1 | 2 | 1 | 3 | 6 | 1 | 1 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| MSV301-2 | 100 | 8 | 8 | 1 | 1 | 2 | 4 | 5 | 2 | 2 |
| MSV358-3 | 100 | 9 | 5-8 | 1 | 1 | 1-2 | 3 | 7 | 1 | 1 |
| MSV358-3 | 100 | 8 | 9 | 1 | 1 | 1-2 | 3 | 7 | 1 | 1 |
| MSV380-1 | 100 | 8 | 5-8 | 1 | 2 | 2 | 3 | 6 | 2 | 2 |
| MSV394-3 | 100 | 8 | 8-9 | 1 | 1 | 1-2 | 3 | 7 | 1 | 2 |
| MSV498-1 | 100 | 7 | 5-6 | 1 | 2 | 2 | 4 | 6 | 1 | 2 |
| MSV498-1 | 100 | 7 | 5 | 1 | 2 | 1 | 4 | 5 | 2 | 2 |
| MSV505-2 | 100 | 8 | 5-6 | 1 | 2 | 2 | 4 | 6 | 1 | 1 |
| MSV507-007 | 100 | 8 | 6 | 1 | 1 | 1-2 | 4 | 5 | 1 | 2 |
| MSV507-094 | 100 | 8 | 9 | 1 | 2 | 2 | 4 | 5 | 1 | 1 |
| MSV507-100 | 100 | 7 | 6 | 1 | 1 | 2 | 4 | 6 | 1 | 2 |
| MSV507-128 | 100 | 9 | 8 | 1 | 1 | 1-2 | 3 | 5 | 1 | 2 |
| MSV507-143 | 100 | 7 | 8-9 | 2 | 1 | 1-2 | 4 | 5 | 1 | 2 |
| MSV507-146 | 100 | 7 | 9 | 1 | 1 | 2 | 4 | 5 | 1 | 2 |
| MSV507-198 | 100 | 9 | 6 | 1 | 1 | 2 | 3 | 5 | 2 | 1 |
| MSW075-1 | 100 | 7 | 5-6 | 1 | 1 | 1-2 | 3 | 5 | 1 | 2 |
| MSW138-2 | 100 | 8 | 6-9 | 1 | 1 | 1-2 | 3 | 5 | 2 | 1 |
| MSW168-2 | 100 | 8 | 7-8 | 2 | 1 | 2 | 1 | 6 | 1 | 1 |
| MSW259-6 | 100 | 7 | 6 | 2 | 2 | 1-2 | 3 | 5 | 1 | 1 |
| MSW259-6 | 100 | 7 | 6-9 | 2 | 1 | 1-2 | 2 | 6 | 2 | 1 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| MSW293-1 | 100 | 7 | 5-6 | 1 | 2 | 2 | 3 | 7 | 2 | 1 |
| MSW474-1 | 100 | 8 | 5-6 | 2 | 1 | 1 | 4 | 5 | 1 | 1 |
| MSW485-2 | 100 | 8 | 6 | 1 | 2 | 1-2 | 3 | 7 | 2 | 3 |
| MSW485-2 | 100 | 8 | 6 | 1 | 2 | 2 | 2 | 7 | 2 | 2 |
| MSX150-1 | 100 | 9 | 4-5 | 2 | 2 | 1-2 | 2 | 5 | 1 | 1 |
| MSX240-3 | 100 | 8 | 5 | 1 | 1 | 1-2 | 4 | 6 | 2 | 3 |
| MSX245-2Y | 100 | 7 | 5-8 | 1 | 4 | 1-2 | 2 | 7-8 | 2 | 2 |
| MSX540-4 | 100 | 8 | 9-6 | 1 | 2 | 2 | 3 | 5 | - | - |
| MSX542-2 | 100 | 8 | 8-9 | 1 | 2 | 2 | 2 | 6 | 1 | 2 |
| NC302-12 | 100 | 8 | 5-3 | 1 | 4 | 1-1 | 4 | 5 | 2 | 2 |
| NC311-9 | 100 | 9 | 6 | 1 | 2 | 2 | 4 | 5 | 1 | 1 |
| NC317-12 | 100 | 8 | 6 | 1 | 1 | 2 | 3 | 7 | 1 | 2 |
| NCJ100-7 | 100 | 8 | 5 | 1 | 1 | 2 | 4 | 5 | 1 | 1 |
| NCJ106-2 | 100 | 9 | 5 | 1 | 1 | 2-3 | 3 | 6 | 1 | 1 |
| NCJ107-6 | 100 | 7 | 5 | 1 | - | - | 4 | - | 1 | 2 |
| ND7799c-1 | 100 | 8 | 8-9 | 1 | 1 | 1 | 4 | 5 | 2 | 2 |
| ND7799c-1 | 100 | 8 | 8 | 1 | - | - | 4 | - | 2 | 2 |
| NDTX060700C-1W | 100 | 6 | 5 | 1 | 1 | 3 | 3 | 5 | 1 | 1 |
| NDTX060700C-1W | 100 | 7 | 4-5 | 2 | 2 | 2 | 4 | 5 | 2 | 1 |
| NDTX071109C-1W | 100 | 8 | 8-5 | 1 | 2 | 1-2 | 4 | 5 | 2 | 2 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| NDTX081644CAB-2W | 100 | 8 | 5 | 1 | 1 | 1 | 4 | 5 | 2 | 1 |
| NDTX081648CB-13W | 100 | 8 | 5 | 1 | 1 | 1-2 | 4 | 4 | 1 | 1 |
| NDTX081648CB-13W | 100 | 8 | 8-9 | 2 | 2 | 2 | 4 | 5 | 1 | 2 |
| NDTX091908AB-2W | 100 | 8 | 5 | 1 | 1 | 2 | 4 | 6 | 1 | 2 |
| NDTX091908AB-2W | 100 | 9 | 5 | 1 | 1 | 2 | 4 | 6 | 2 | 1 |
| NDTX102462C-6W | 100 | 8 | 5 | 1 | 1 | 2 | 3 | 6 | 1 | 1 |
| NDTX102514ABC-5W | 100 | 8 | 5 | 1 | 1 | 3 | 4 | 5 | 1 | 2 |
| NDTX102557-1W | 100 | 9 | 5 | 1 | 1 | 2 | 4 | 6 | 1 | 2 |
| NY152(H15-5) | 100 | 8 | 5-6 | 1 | 3 | 2 | 3 | 6 | 1 | 2 |
| NY152(H15-5) | 100 | 9 | 9-6 | 1 | 2 | 1-2 | 2 | 7 | 2 | 2 |
| NY153(H25-4) | 100 | 7 | 9-6 | 1 | 2 | 1 | 3 | 4 | 2 | 2 |
| NY153(H25-4) | 100 | 8 | 6 | 1 | 1 | 1 | 3 | 5 | 1 | 1 |
| NYWJ107-5 | 100 | 7 | 9 | 2 | 2 | 2 | 4 | 5 | 2 | 1 |
| NYWJ11-5 | 100 | 9 | 8-9 | 1 | 2 | 1 | 2 | 5 | 1 | 2 |
| NYWJ11-5 | 100 | 9 | 9 | 1 | 3 | 1 | 1 | 5 | 1 | 1 |
| TX09396-1W | 100 | 8 | 6-9 | 2 | 2 | 2 | 4 | 5 | 2 | 3 |
| TX09396-1W | 100 | 8 | 5 | 2 | 2 | 1 | 4 | 5 | 1 | 1 |
| TX09403-14W | 100 | 8 | 5 | 1 | 1 | 1-2 | 3 | 6 | 2 | 1 |
| W10670-3(QSW102-3) | 100 | 9 | 5-3 | 1 | - | - | 4 | - | 2 | 2 |
| W10670-3(QSW102-3) | 100 | 9 | 5 | 1 | 2 | 1 | 3 | 6 | 1 | 2 |

Table 25 (cont'd). Plant growth and tuber characteristics of the 2014 USPB National Chip Processing Board Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | TS | Merit | APP | CHIP 1-5 | Bethke SED |
| W6822-3 | 100 | 8 | 5-6 | 1 | 2 | 1-2 | 3 | 5 | 2 | 2 |
| W6822-3 | 100 | 8 | 9-6 | 1 | 2 | 1 | 3 | 5 | 1 | 1 |
| W9200-13 | 100 | 8 | 8-5 | 1 | 1 | 2 | 3 | 5 | 1 | 1 |
| W9200-13 | 100 | 8 | 8 | 1 | 2 | 2 | 3 | 7 | 1 | 1 |
| W9306-1 | 100 | 6 | 5 | 1 | 1 | 2 | 4 | 7 | 1 | 1 |
| W9306-1 | 100 | 8 | 5-8 | 1 | 2 | 2 | 4 | 7 | 1 | 1 |
| W9827-7 | 100 | 9 | 4-5 | 1 | 5 | 2 | 4 | 5 | 2 | 1 |
| W9835-1 | 80 | 9 | 8-5 | 1 | 2 | 1-2 | 4 | 6 | 1 | 2 |
| W9835-2 | 100 | 9 | 5-6 | 1 | 2 | 2 | 4 | 7 | 1 | 2 |
| W9869-1 | 100 | 8 | 8-5 | 1 | 2 | 1-2 | 4 | 6 | 2 | 2 |
| W9871-4 | 100 | 8 | 6 | 2 | 2 | 1-2 | 2 | 6 | 2 | 1 |
| W9871-6 | 100 | 9 | 6-9 | 1 | 2 | 2 | 4 | 6 | 1 | 1 |
| W9874-3 | 100 | 9 | 5 | 1 | 5 | 2 | 2 | 5 | 2 | 2 |
| W9891-1 | 100 | 8 | 6-9 | 1 | 2 | 1 | 3 | 5 | 2 | 1 |
| W9905-3 | 100 | 8 | 6 | 1 | 2 | 1 | 4 | 5 | 1 | 2 |
| W9905-6 | 100 | 9 | 5 | 1 | 2 | 2 | 4 | 5 | 2 | 2 |
| W9905-7 | 100 | 8 | 6 | 2 | 2 | 2 | 4 | 5 | 1 | 2 |
| W9922-5 | 100 | 8 | 6 | 1 | 1 | 2 | 4 | 5 | 2 | 2 |
| W9967-16 | 100 | 9 | 8 | 1 | 4 | 2 | 3 | 7 | 1 | 1 |
| W9967-4 | 100 | 9 | 8 | 1 | 4 | 2 | 3 | 7 | 1 | 1 |
| W9967-5 | 100 | 9 | 9 | 1 | 4 | 1-2 | 2 | 6 | 1 | 1 |
| W9968-2 | 100 | 9 | 7-4 | 1 | 1 | 1 | 4 | 5 | 2 | 1 |
| W9968-3 | 100 | 8 | 6 | 1 | 3 | 1-2 | 4 | 5 | 2 | 2 |
| W9968-5 | 100 | 7 | 9-6 | 1 | 2 | 2 | 2 | 5 | 2 | 2 |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 26. External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 15 | 0 | 0 | 0 |
| Atlantic | 0 | 0 | 1 | 36 | 36 | 0 | 0 | 0 | 5 | 5 | 0 | 0 |
| Atlantic | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| Atlantic | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 15 | 5 | 0 | 0 |
| Atlantic | 0 | 0 | 2 | 10 | 12 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| Elkton | 2 | 0 | 2 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elkton | 0 | 2 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elkton | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elkton | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Elkton | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 1 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 1 | 9 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 1 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marcy | 1 | 0 | 1 | 4 | 6 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Marcy | 0 | 0 | 2 | 11 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marcy | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marcy | 0 | 0 | 7 | 6 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marcy | 0 | 0 | 2 | 16 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Snowden | 0 | 0 | 2 | 11 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snowden | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| Snowden | 0 | 1 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snowden | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snowden | 0 | 0 | 1 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC01144-1W | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AC08094-2W | 2 | 0 | 0 | 16 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4386-16 | 0 | 0 | 0 | 30 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4386-16 | 0 | 0 | 2 | 8 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4442-4 | 0 | 0 | 2 | 21 | 23 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| AF4442-4 | 0 | 0 | 2 | 35 | 37 | - | - | - | - | - | - | - |
| AF4552-5 | 0 | 0 | 1 | 18 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4552-5 | 0 | 0 | 2 | 23 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4648-2 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4648-2 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4971-3 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4975-3 | 0 | 0 | 0 | 63 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4975-3 | 0 | 0 | 0 | 30 | 30 | 10 | 0 | 0 | 0 | 5 | 0 | 0 |
| AF5033-11 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| AF5033-13 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Brown Center | | |
| Clone | Growth Cracks | Mis-shapen | Sun-burned | Rotten & misc. | Total Culls[1] | HH | BR | CRS | IHN | L | M | H |
| AF5039-11 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5039-15 | 3 | 0 | 0 | 23 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5040-8 | 0 | 0 | 1 | 14 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5040-8 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5044-21 | 0 | 0 | 2 | 7 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5142-1 | 5 | 0 | 0 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5152-2 | 0 | 0 | 3 | 14 | 17 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5152-3 | 0 | 0 | 0 | 39 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5153-11 | 1 | 0 | 1 | 4 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5280-2 | 0 | 0 | 1 | 19 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5281-4 | 0 | 0 | 2 | 18 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5292-4 | 0 | 0 | 2 | 2 | 4 | 5 | 0 | 0 | 0 | 15 | 25 | 10 |
| AF5332-2 | 0 | 0 | 2 | 15 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5386-4 | 0 | 0 | 9 | 5 | 14 | 5 | 0 | 0 | 0 | 10 | 0 | 0 |
| AF5387-2 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5387-6 | 0 | 0 | 1 | 9 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5392-8 | 0 | 0 | 1 | 15 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5425-6 | 0 | 0 | 1 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5426-3 | 0 | 0 | 3 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5432-5 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| AF5445-4 | 0 | 0 | 4 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5446-11 | 0 | 0 | 1 | 13 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF5447-10 | 0 | 0 | 7 | 3 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AFW5039-1 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2827-12 | 0 | 1 | 5 | 7 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2842-1 | 0 | 0 | 1 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2842-1 | 0 | 0 | 2 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2869-20 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2869-20 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2869-28 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2869-29 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2869-29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2883-11 | 0 | 0 | 4 | 6 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2883-11 | 0 | 0 | 0 | 4 | 4 | - | - | - | - | - | - | - |
| B2883-16 | 5 | 4 | 0 | 17 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2890-11 | 0 | 0 | 7 | 9 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2895-8 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| B2895-8 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2904-2 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2904-2 | 0 | 0 | 0 | 13 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Brown Center | | |
| Clone | Growth Cracks | Mis-shapen | Sun-burned | Rotten & misc. | Total Culls[1] | HH | BR | CRS | IHN | L | M | H |
| B2908-3 | 0 | 0 | 6 | 5 | 10 | 5 | 0 | 0 | 0 | 10 | 5 | 5 |
| B2936-2 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| B2936-2 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2947-4 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2947-4 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| B2947-8 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2947-8 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2950-2 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2950-2 | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2950-3 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2950-3 | 0 | 2 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2951-5 | 1 | 0 | 5 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2951-5 | 8 | 0 | 0 | 3 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2960-4 | 1 | 0 | 2 | 8 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2960-4 | 0 | 2 | 0 | 22 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2971-2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2981-3 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2981-5 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| B2993-6 | 0 | 0 | 0 | 22 | 22 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2996-1 | 0 | 0 | 12 | 6 | 18 | 0 | 0 | 0 | 0 | 10 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Brown Center | | |
| Clone | Growth Cracks | Mis-shapen | Sun-burned | Rotten & misc. | Total Culls[1] | HH | BR | CRS | IHN | L | M | H |
| B2999-6 | 0 | 0 | 1 | 7 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3000-1 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3002-1 | 2 | 0 | 2 | 3 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3003-1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3003-10 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3005-7 | 0 | 0 | 0 | 33 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3005-9 | 0 | 0 | 0 | 51 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3012-3 | 0 | 0 | 2 | 30 | 32 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| B3012-7 | 0 | 0 | 1 | 14 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B3015-1 | 0 | 0 | 1 | 30 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC311-4 | 0 | 0 | 2 | 59 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC311-4 | 5 | 0 | 0 | 29 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC326-8 | 0 | 0 | 0 | 41 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC366-1 | 1 | 0 | 0 | 21 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC371-2 | 0 | 0 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CO05061-6W | 0 | 0 | 0 | 25 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CO05061-6W | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CO07070-10W | 0 | 0 | 5 | 17 | 22 | 0 | 0 | 0 | 5 | 0 | 5 | 0 |
| CO07070-13W | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| COTX09022-5Ru/Y | 0 | 0 | 0 | 43 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Brown Center | | |
| Clone | Growth Cracks | Mis-shapen | Sun-burned | Rotten & misc. | Total Culls[1] | HH | BR | CRS | IHN | L | M | H |
| H15-17 | 1 | 2 | 0 | 47 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| J104-3 | 0 | 0 | 1 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| J104-3 | 0 | 0 | 1 | 13 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| J105-10 | 0 | 0 | 0 | 22 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| J105-10 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| J112-2 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| J112-2 | 0 | 1 | 0 | 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| K27-1 | 0 | 0 | 0 | 31 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| K27-3 | 0 | 1 | 0 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| K28-18 | 1 | 3 | 0 | 27 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| K28-7 | 0 | 0 | 0 | 3 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| K31-4 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN07151WB-01 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN07151WB-01 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN07152WB-01 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN07152WB-01 | 0 | 0 | 1 | 16 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN07159WB-01 | 0 | 2 | 0 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN07159WB-01 | 0 | 3 | 0 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN07289BB-01 | 0 | 1 | 0 | 10 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN07330BB-01 | 0 | 0 | 1 | 19 | 20 | 0 | 0 | 0 | 0 | 10 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Brown Center | | |
| Clone | Growth Cracks | Mis-shapen | Sun-burned | Rotten & misc. | Total Culls[1] | HH | BR | CRS | IHN | L | M | H |
| MN08101BW-01 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN08102BW-01 | 0 | 0 | 1 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN08102BW-01 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN09059BB-01 | 1 | 0 | 0 | 14 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN11130PLWRGR-02 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | - | - |
| MN11136PLWRGR-10 | 0 | 0 | 2 | 19 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN11136PLWRGR-11 | 2 | 0 | 5 | 19 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN11142PLWRGR-01 | 11 | 0 | 2 | 48 | 61 | - | - | - | - | - | - | - |
| MN11153PLWRGR-03 | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MN11158PLWRGR-01 | 61 | 0 | 0 | 23 | 84 | - | - | - | - | - | - | - |
| MN11189PLWRGR-02 | 0 | 0 | 3 | 18 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSM246-B | 3 | 0 | 1 | 38 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSM246-B | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSQ089-1 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSQ089-1 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSR061-1 | 0 | 0 | 2 | 26 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSR061-1 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSR127-2 | 2 | 0 | 3 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSR127-2 | 2 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSS428-2 | 0 | 0 | 0 | 35 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Brown Center | | |
| Clone | Growth Cracks | Mis-shapen | Sun-burned | Rotten & misc. | Total Culls[1] | HH | BR | CRS | IHN | L | M | H |
| MSS428-2 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MST184-3 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MST184-3 | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MST186-1Y | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MST186-1Y | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MST191-2Y | 0 | 5 | 0 | 15 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MST191-2Y | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MST229-1 | 5 | 0 | 1 | 3 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MST443-1 | 5 | 4 | 0 | 21 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSU088-1 | 0 | 0 | 0 | 36 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSU245-1 | 1 | 0 | 2 | 26 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSU379-1 | 0 | 0 | 0 | 25 | 25 | 0 | 0 | 0 | 10 | 0 | 0 | 0 |
| MSV016-2 | 0 | 0 | 1 | 13 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV030-4 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV030-4 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV093-1 | 0 | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV111-1 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV241-2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV292-1Y | 2 | 0 | 0 | 19 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV301-2 | 0 | 0 | 0 | 28 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| MSV301-2 | 0 | 0 | 0 | 26 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV358-3 | 0 | 1 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV358-3 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV380-1 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 15 | 0 | 0 |
| MSV394-3 | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV498-1 | 0 | 0 | 4 | 10 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV498-1 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV505-2 | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 15 | 0 | 0 | 0 |
| MSV507-007 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV507-094 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV507-100 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| MSV507-128 | 0 | 3 | 0 | 6 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV507-143 | 6 | 1 | 1 | 4 | 12 | 0 | 0 | 0 | 10 | 5 | 0 | 0 |
| MSV507-146 | 0 | 0 | 0 | 37 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSV507-198 | 0 | 0 | 0 | 20 | 20 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSW075-1 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSW138-2 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSW168-2 | 0 | 0 | 4 | 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSW259-6 | 0 | 1 | 0 | 9 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSW259-6 | 0 | 0 | 0 | 19 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Brown Center | | |
| Clone | Growth Cracks | Mis-shapen | Sun-burned | Rotten & misc. | Total Culls[1] | HH | BR | CRS | IHN | L | M | H |
| MSW293-1 | 3 | 0 | 2 | 7 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSW474-1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSW485-2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSW485-2 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSX150-1 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSX240-3 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSX245-2Y | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSX540-4 | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSX542-2 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC302-12 | 0 | 5 | 0 | 14 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC311-9 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NC317-12 | 0 | 0 | 2 | 11 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NCJ100-7 | 0 | 0 | 0 | 29 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NCJ106-2 | 0 | 0 | 0 | 28 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NCJ107-6 | 0 | 0 | 0 | 42 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ND7799c-1 | 0 | 0 | 0 | 41 | 41 | - | - | - | - | - | - | - |
| ND7799c-1 | 0 | 0 | 8 | 54 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX060700C-1W | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX060700C-1W | 2 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX071109C-1W | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| NDTX081644CAB-2W | 2 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX081648CB-13W | 0 | 0 | 0 | 31 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX081648CB-13W | 0 | 0 | 3 | 17 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX091908AB-2W | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX091908AB-2W | 0 | 1 | 1 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX102462C-6W | 0 | 0 | 0 | 16 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX102514ABC-5W | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NDTX102557-1W | 0 | 0 | 1 | 14 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY152(H15-5) | 0 | 0 | 0 | 45 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY152(H15-5) | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY153(H25-4) | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY153(H25-4) | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NYWJ107-5 | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| NYWJ11-5 | 0 | 0 | 0 | 13 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NYWJ11-5 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TX09396-1W | 0 | 0 | 0 | 4 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| TX09396-1W | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| TX09403-14W | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W10670-3(QSW102-3) | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W10670-3(QSW102-3) | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 26 (cont'd). External and internal defects of the 2014 USPB National Chip Processing Board Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| W6822-3 | 0 | 0 | 5 | 9 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W6822-3 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9200-13 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9200-13 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9306-1 | 0 | 17 | 0 | 9 | 25 | - | - | - | - | - | - | - |
| W9306-1 | 0 | 2 | 2 | 3 | 7 | 0 | 0 | 0 | 20 | 0 | 0 | 0 |
| W9827-7 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9835-1 | 0 | 0 | 0 | 24 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9835-2 | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9869-1 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9871-4 | 2 | 0 | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9871-6 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 10 | 0 | 0 |
| W9874-3 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9891-1 | 4 | 0 | 0 | 10 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9905-3 | 0 | 0 | 0 | 20 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9905-6 | 0 | 0 | 0 | 20 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9905-7 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9922-5 | 0 | 1 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9967-16 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9967-4 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9967-5 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9968-2 | 18 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9968-3 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| W9968-5 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

# CHAPTER 10. CHIPPING POTATO VARIETY TRIAL, 2014

***General Comments***

A goal of the Chipping Potato Variety trial is to identify a short-season processing potato variety with better production and quality characteristics than the "standard" Atlantic.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | March 4, 2014 |
| Harvest Date | June 9, 2014 |
| Season Length | 97 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 6 (Standard: Atlantic) |
| Number of Clones | 12 |
| Within Row Spacing | 8 in (20 cm) |
| Between Row Spacing | 40 in (102 cm) |
| Replications | 4 |
| Plot Size | 16 ft (4.9 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 38 DAP |
| Highest Total Yield | Elkton (382 cwt or 42.7 T/ha) |
| Highest Marketable Yield | Elkton (338 cwt or 37.8 T/ha) |
| Highest Specific Gravity | B2842-1 (1.075) |

Table 27. Production statistics for 2014 Chipping Variety Trial potato selections in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | MFX | 299 | 247 | 100 | 1 | 8 | 51 | 20 | 20 | 0 | 91 | 40 | 1.070 |
| Elkton | USDA | 382 | 338 | 137 | 1 | 8 | 65 | 19 | 6 | 0 | 91 | 25 | 1.067 |
| Harley Blackwell | MFX | 330 | 244 | 99 | 3 | 16 | 63 | 8 | 10 | 0 | 81 | 18 | 1.067 |
| Marcy | MFX | 379 | 335 | 135 | 1 | 7 | 61 | 18 | 13 | 0 | 91 | 31 | 1.065 |
| Snowden | USDA | 369 | 304 | 123 | 1 | 10 | 76 | 6 | 7 | 0 | 90 | 13 | 1.071 |
| Superior | USDA | 192 | 96 | 39 | 3 | 23 | 70 | 0 | 3 | 0 | 73 | 3 | 1.067 |
| B2728-2 | USDA | 306 | 228 | 92 | 2 | 14 | 77 | 2 | 4 | 0 | 84 | 7 | 1.062 |
| B2814-14 | USDA | 343 | 224 | 91 | 2 | 7 | 55 | 19 | 17 | 0 | 91 | 36 | 1.054 |
| B2832-12 | USDA | 338 | 254 | 103 | 2 | 13 | 58 | 19 | 8 | 0 | 84 | 27 | 1.070 |
| B2833-8 | USDA | 274 | 162 | 65 | 4 | 31 | 64 | 0 | 1 | 0 | 64 | 1 | 1.072 |
| B2834-8 | USDA | 283 | 212 | 86 | 2 | 9 | 59 | 25 | 5 | 0 | 90 | 30 | 1.070 |
| B2842-1 | USDA | 312 | 197 | 80 | 4 | 23 | 65 | 6 | 1 | 0 | 72 | 7 | 1.075 |
| B2869-29 | USDA | 346 | 254 | 103 | 2 | 19 | 72 | 6 | 0 | 0 | 79 | 6 | 1.070 |
| B2895-2 | USDA | 288 | 165 | 67 | 3 | 19 | 59 | 15 | 4 | 0 | 78 | 19 | 1.066 |
| B2904-2 | USDA | 362 | 267 | 108 | 2 | 10 | 67 | 11 | 9 | 1 | 87 | 20 | 1.063 |
| B2947-7 | USDA | 360 | 239 | 97 | 2 | 11 | 57 | 19 | 11 | 0 | 86 | 30 | 1.068 |
| B2950-2 | USDA | 305 | 202 | 82 | 1 | 17 | 69 | 10 | 2 | 0 | 81 | 12 | 1.071 |
| B2950-9 | USDA | 141 | 62 | 25 | 5 | 39 | 52 | 2 | 3 | 0 | 57 | 5 | 1.069 |
| B2951-5 | USDA | 311 | 213 | 86 | 4 | 21 | 74 | 2 | 0 | 0 | 75 | 2 | 1.072 |
| B2951-7 | USDA | 340 | 267 | 108 | 2 | 17 | 72 | 6 | 2 | 0 | 81 | 8 | 1.067 |

Table 27 (cont'd). Production statistics for 2014 Chipping Variety Trial potato selections in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B2951-8 | USDA | 355 | 284 | 115 | 2 | 12 | 71 | 13 | 2 | 0 | 86 | 15 | 1.063 |
| B2952-6 | USDA | 325 | 236 | 95 | 2 | 14 | 66 | 13 | 4 | 0 | 84 | 18 | 1.065 |
| B2952-7 | USDA | 324 | 172 | 70 | 5 | 38 | 57 | 0 | 0 | 0 | 57 | 0 | 1.061 |
| B2952-13 | USDA | 310 | 180 | 73 | 4 | 31 | 64 | 0 | 0 | 0 | 65 | 0 | 1.062 |
| B2954-11 | USDA | 309 | 233 | 94 | 3 | 16 | 55 | 17 | 9 | 0 | 81 | 26 | 1.057 |
| B2968-3 | USDA | 323 | 248 | 100 | 2 | 12 | 61 | 17 | 9 | 0 | 87 | 26 | 1.061 |
| BNC177-5 | USDA | 321 | 239 | 97 | 1 | 14 | 71 | 8 | 5 | 0 | 84 | 13 | 1.072 |
| BNC182-5 | USDA | 414 | 376 | 152 | 1 | 6 | 59 | 23 | 10 | 0 | 93 | 33 | 1.065 |
| BNC202-3 | USDA | 373 | 284 | 115 | 3 | 11 | 58 | 17 | 11 | 0 | 86 | 28 | 1.069 |
| BNC266-6 | USDA | 428 | 384 | 155 | 1 | 7 | 67 | 15 | 10 | 0 | 92 | 25 | 1.073 |
| *MSD*[3] | | 48 | 52 | | 1 | 5 | 10 | 7 | 7 | - | 6 | 9 | 0.0075 |
| *P Value* | | *<0.0001* | *<0.0001* | | | *<0.0001* | *<0.0001* | *<0.0001* | *<0.0001* | *0.4900* | *<0.0001* | *<0.0001* | *<0.0001* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 28. Plant growth and tuber characteristics of the 2014 Chipping Variety Trial potato selections in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Atlantic | 100 | 6.8 | 8-5 | - | 2 | 6 | 5 | 3 | 6 | 5 | |
| Elkton | 100 | 8.3 | 6 | - | 2 | 6 | 5 | 3 | 6 | 6 | |
| Harley Blackwell | 100 | 8.8 | 8-5 | - | 1 | 6 | 5 | 3 | 5 | 7 | |
| Marcy | 100 | 7.0 | 8 | - | 1 | 6 | 5 | 3 | 5 | 6 | |
| Snowden | 100 | 9.0 | 8 | - | 1 | 6 | 5 | 3 | 4 | 6 | |
| Superior | 100 | 7.3 | 4-7 | - | 2 | 7 | 5 | 3 | 3 | 5 | |
| B2728-2 | 100 | 7.0 | 6 | - | 1 | 7 | 7 | 3 | 5 | 7 | purple eyes |
| B2814-14 | 100 | 8.8 | 5 | - | 4 | 7 | 6 | 3 | 5 | 6 | |
| B2832-12 | 100 | 8.3 | 5-8 | - | 1 | 6 | 5 | 3 | 4 | 5 | |
| B2833-8 | 100 | 8.3 | 5-8 | - | 1 | 8 | 7 | 3 | 6 | 7 | |
| B2834-8 | 100 | 8.8 | 5-6 | - | 1 | 6 | 5 | 3 | 6 | 6 | |
| B2842-1 | 100 | 8.8 | 8-5 | - | 3 | 9 | 6 | 3 | 5 | 5 | heat sprouts |
| B2869-29 | 100 | 8.5 | 5-8 | - | 1 | 6 | 6 | 3 | 6 | 7 | |
| B2895-2 | 100 | 8.8 | 8-9 | - | 2 | 6 | 5 | 3 | 6 | 8 | |
| B2904-2 | 100 | 8.8 | 8-5 | - | 1 | 6 | 5 | 3 | 6 | 7 | |
| B2947-7 | 100 | 8.3 | 6-9 | - | 2 | 6 | 5 | 3 | 7 | 8 | |
| B2950-2 | 100 | 8.5 | 8-5 | - | 1 | 8 | 6 | 3 | 7 | 5 | lenticels |
| B2950-9 | 100 | 8.0 | 8-5 | - | 2 | 7 | 5 | 3 | 6 | 7 | |
| B2951-5 | 100 | 8.3 | 6-9 | - | 2 | 9 | 7 | 3 | 7 | 7 | |
| B2951-7 | 100 | 9.0 | 5-6 | - | 2 | 6 | 5 | 3 | 6 | 8 | |

Table 28 (cont'd). Plant growth and tuber characteristics of the 2014 Chipping Variety Trial potato selections in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| B2951-8 | 100 | 7.5 | 8-5 | - | 1 | 8 | 7 | 3 | 6 | 8 | |
| B2952-6 | 100 | 7.5 | 9 | - | 4 | 9 | 7 | 3 | 6 | 6 | |
| B2952-7 | 100 | 7.3 | 8-5 | - | 4 | 9 | 7 | 3 | 7 | 7 | tablestock? |
| B2952-13 | 100 | 8.3 | 5 | - | 4 | 9 | 7 | 3 | 6 | 6 | |
| B2954-11 | 100 | 8.3 | 5-6 | - | 1 | 7 | 5 | 2 | 7 | 8 | |
| B2968-3 | 100 | 7.3 | 6-9 | - | 1 | 6 | 6 | 3 | 7 | 7 | |
| BNC177-5 | 100 | 9.0 | 5-6 | - | 1 | 6 | 5 | 3 | 6 | 6 | |
| BNC182-5 | 100 | 7.5 | 6 | - | 1 | 7 | 6 | 3 | 6 | 8 | |
| BNC202-3 | 100 | 8.8 | 8 | - | 3 | 6 | 5 | 3 | 5 | 5 | |
| BNC266-6 | 100 | 8.5 | 6-9 | - | 1 | 7 | 6 | 3 | 5 | 5 | |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 29. External and internal defects of the 2014 Chipping Variety Trial potato selections in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 0 | 1 | 8 | 9 | 0 | 0 | 0 | 11 | 1 | 0 | 0 |
| Elkton | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marcy | 0 | 0 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snowden | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Superior | 0 | 0 | 0 | 33 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2728-2 | 0 | 0 | 0 | 11 | 11 | 1 | 0 | 0 | 20 | 3 | 0 | 0 |
| B2814-14 | 1 | 0 | 0 | 28 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2832-12 | 0 | 1 | 1 | 9 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2833-8 | 0 | 0 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2834-8 | 0 | 0 | 0 | 17 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2842-1 | 1 | 0 | 0 | 12 | 13 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| B2869-29 | 4 | 0 | 0 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2895-2 | 0 | 0 | 0 | 28 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2904-2 | 0 | 0 | 0 | 15 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2947-7 | 0 | 0 | 0 | 23 | 23 | 1 | 0 | 0 | 8 | 1 | 0 | 0 |
| B2950-2 | 0 | 0 | 0 | 18 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2950-9 | 0 | 0 | 0 | 27 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2951-5 | 5 | 1 | 0 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2951-7 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 29 (cont'd). External and internal defects of the 2014 Chipping Variety Trial potato selections in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| B2951-8 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 0 | 5 | 3 | 0 |
| B2952-6 | 0 | 0 | 0 | 14 | 14 | 3 | 0 | 0 | 8 | 6 | 4 | 0 |
| B2952-7 | 0 | 0 | 0 | 7 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| B2952-13 | 0 | 0 | 0 | 10 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2954-11 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| B2968-3 | 1 | 0 | 1 | 9 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC177-5 | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC182-5 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| BNC202-3 | 1 | 3 | 0 | 9 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC266-6 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| *MSD*[3] | 1 | 1 | 1 | 7 | 7 | - | - | - | 6 | 3 | 2 | 1 |
| *P Value* | *<0.0001* | *0.0080* | *0.0002* | *<0.0001* | *<0.0001* | *0.6200* | - | - | *<.0001* | *0.0001* | *0.0029* | *0.0800* |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 11. USPB/SNACK FOOD ASSOCIATION POTATO VARIETY TRIAL, 2014

***General Comments***

A goal of the Snack Food Association trial is to identify a short-season processing potato variety with better production and quality characteristics than the "standards" Atlantic and Snowden. Potatoes were fried and chip scores are noted in Table 31. This trial is supported by the United States Potato Board.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 6, 2014 |
| Harvest Date | June 9, 2014 |
| Season Length | 123 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N); Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 3 (Standard: Atlantic) |
| Number of Clones | 9 |
| Within Row Spacing | Approx. 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 4 |
| Plot Size | Single 250 ft row (76.2 m) planted for each variety. Four, 20 ft (6.1 m) plots harvested from each row to determine production and quality statistics. |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 43 DAP |
| Highest Total Yield | MSL061-1 (334 cwt or 37.4 TM/ha) |
| Highest Marketable Yield | CO03243-3W (272 cwt or 30.4 TM/ha) |
| Highest Specific Gravity | MSK061-4 (1.079) |

Table 30. Production statistics for the 2014 USPB-SFA Variety Trial potato selections in Hastings, Florida.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | MFX | 248 | 201 | 100 | 3 | 12 | 64 | 9 | 12 | 0 | 85 | 21 | 1.077 |
| Snowden | MFX | 304 | 262 | 131 | 2 | 9 | 49 | 24 | 16 | 0 | 89 | 40 | 1.075 |
| Harley Blackwell | MFX | 157 | 104 | 52 | 5 | 22 | 50 | 15 | 9 | 0 | 73 | 23 | 1.059 |
| A01143-3C | USDA | 321 | 234 | 117 | 4 | 19 | 72 | 3 | 2 | 0 | 77 | 6 | 1.076 |
| AF4157-6 | UM | 234 | 172 | 86 | 3 | 22 | 75 | 0 | 0 | 0 | 75 | 0 | 1.074 |
| CO02024-9W | CSU | 188 | 83 | 41 | 13 | 40 | 46 | 0 | 0 | 0 | 46 | 0 | 1.072 |
| CO02321-4W | CSU | 270 | 192 | 96 | 4 | 22 | 67 | 6 | 1 | 0 | 74 | 7 | 1.070 |
| CO03243-3W | CSU | 331 | 272 | 136 | 2 | 13 | 70 | 12 | 3 | 0 | 85 | 15 | 1.068 |
| MSK061-4 | MSU | 189 | 134 | 67 | 3 | 24 | 70 | 4 | 0 | 0 | 73 | 4 | 1.079 |
| MSL061-1 | MSU | 334 | 246 | 122 | 3 | 22 | 68 | 4 | 3 | 0 | 75 | 7 | 1.069 |
| W5955-1 | UW | 269 | 190 | 95 | 5 | 18 | 58 | 11 | 8 | 0 | 78 | 20 | 1.066 |
| W6609-3 | UW | 190 | 126 | 63 | 4 | 21 | 69 | 6 | 0 | 0 | 75 | 6 | 1.064 |
| *MSD*[3] | | 38 | 29 | | 3 | 6 | 9 | 4 | 5 | - | 7 | 7 | 0.0100 |
| *P Value* | | *<0.001* | *<0.001* | | *<0.001* | *<0.001* | *<0.001* | *<0.001* | *<0.001* | *ns* | *<0.001* | *<0.001* | *0.0030* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 31. Plant growth and tuber characteristics of the 2014 USPB-SFA Variety Trial potato selections in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Atlantic | 49 | 6 | 9-6 | 2 | 2 | 6 | 5 | 3 | 6 | 6 | |
| Snowden | 57 | 6 | 9 | 3 | 1 | 6 | 5 | 3 | 4 | 6 | |
| Harley Blackwell | 32 | 7 | 5-8 | 1 | 1 | 7 | 6 | 3 | 5 | 7 | |
| A01143-3C | 54 | 7 | 6 | 3 | 1 | 6 | 6 | 3 | 6 | 5 | |
| AF4157-6 | 53 | 6 | 5-8 | 1 | 1 | 7 | 6 | 3 | 6 | 8 | |
| CO02024-9W | 43 | 6 | 6-9 | 1 | 2 | 6 | 6 | 3 | 5 | 5 | flakey skin, too many shapes |
| CO02321-4W | 62 | 7 | 6-9 | 1 | 2 | 8 | 7 | 3 | 6 | 7-8 | |
| CO03243-3W | 65 | 6 | 6-9 | 2 | 1 | 7 | 6 | 3 | 6 | 7 | |
| MSK061-4 | 39 | 6 | 9-6 | 2 | 2 | 7 | 6 | 3 | 7 | 8 | |
| MSL061-1 | 74 | 7 | 9-6 | 2 | 2 | 6 | 5 | 3 | 6 | 7 | |
| W5955-1 | 45 | 6 | 6-9 | 3 | 2 | 7 | 5 | 3 | 6 | 7 | |
| W6609-3 | 44 | 7 | 5-8 | 3 | - | - | - | - | - | - | |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 32. External and internal defects of the 2014 USPB-SFA Variety Trial potato selections in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 1 | 1 | 2 | 5 | 4 | 0 | 0 | 14 | 4 | 1 | 3 |
| Snowden | 0 | 1 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 1 | 1 | 9 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| A01143-3C | 0 | 3 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4157-6 | 0 | 1 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| CO02024-9W | 1 | 2 | 1 | 4 | 8 | 1 | 0 | 0 | 1 | 0 | 1 | 0 |
| CO02321-4W | 0 | 1 | 2 | 2 | 4 | 0 | 0 | 0 | 6 | 1 | 1 | 0 |
| CO03243-3W | 0 | 1 | 1 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| MSK061-4 | 0 | 2 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSL061-1 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| W5955-1 | 1 | 1 | 2 | 5 | 9 | 0 | 0 | 0 | 15 | 0 | 0 | 1 |
| W6609-3 | 0 | 1 | 1 | 7 | 10 | 1 | 0 | 0 | 6 | 11 | 4 | 0 |
| *MSD*[3] | - | - | - | 2 | 4 | - | - | - | 9 | 3 | - | 2 |
| *P Value* | *ns* | *ns* | *ns* | *<0.001* | *<0.001* | *ns* | *ns* | *ns* | *0.0040* | *<0.001* | *ns* | *0.0400* |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 12. NE1231 REGIONAL PROJECT POTATO VARIETY TRIAL, 2014

***General Comments***

The NE1231 Regional Project is a multi-state potato evaluation program developed to identify and evaluate new and advanced potato clones. The production, adaptation, and performance stability of new potato clones is documented under a wide range of geographic, climatic, soil, and cultural conditions. The University of Maine produces and supplies all cooperators with similar seed.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 20, 2014 |
| Vine Kill Dates | May 23, 2014 |
| Harvest Date | June 12, 2014 |
| Season Length | 92 days planting to vine kill;<br>112 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 11 (Standard: Atlantic) |
| Number of Clones | 15 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 4 |
| Plot Size | 16 ft (4.9 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 40 DAP |
| Highest Total Yield | NYH15-17 (436 cwt/acre or 48.8 MT/ha) |
| Highest Marketable Yield | BNC182-5 (359 cwt/acre or 40.2 MT/ha) |
| Highest Specific Gravity | Atlantic (1.070) |
| Best Overall Appearance | Atlantic, Teton Russet, AF4157-6,<br>CO098012-R, NY150 (8.0, very good) |

Table 33. Production statistics for the 2014 NE1231 potato variety trial selections in Hastings, FL.

| | Total | Marketable Yield[1] | | Size Distribution by Class (%)[2] | | | | | | Size Class Range (%) | | Specific |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone[4] | Yield (cwt/A) | (cwt/A) | % of standard | C | B | A1 | A2 | A3 | A4 | A1 to A3 | A2 to A3 | Gravity |
| Atlantic | 383 | 328 | 100 | 1 | 8 | 68 | 10 | 13 | 0 | 91 | 23 | 1.070 |
| Chieftain | 399 | 302 | 92 | 1 | 10 | 77 | 11 | 1 | 0 | 89 | 12 | 1.056 |
| Teton Russet | 294 | 197 | 60 | 1 | 19 | 76 | 4 | 0 | 0 | 80 | 4 | 1.063 |
| Palisade Russet | 259 | 178 | 54 | 1 | 18 | 77 | 5 | 0 | 0 | 81 | 5 | 1.063 |
| Dark Red Norland | 311 | 175 | 53 | 2 | 22 | 75 | 0 | 0 | 0 | 75 | 0 | 1.057 |
| Katahdin | 297 | 224 | 68 | 3 | 13 | 67 | 10 | 7 | 0 | 84 | 17 | 1.059 |
| Kennebec | 302 | 229 | 70 | 2 | 11 | 58 | 19 | 10 | 0 | 88 | 29 | 1.061 |
| Rochdale Gold-Doree | 344 | 246 | 75 | 2 | 18 | 69 | 9 | 2 | 0 | 80 | 11 | 1.063 |
| Snowden | 343 | 263 | 80 | 1 | 20 | 73 | 6 | 0 | 0 | 79 | 6 | 1.068 |
| Superior | 287 | 208 | 63 | 2 | 17 | 75 | 6 | 0 | 0 | 81 | 6 | 1.064 |
| Yukon Gold | 284 | 176 | 53 | 3 | 18 | 62 | 11 | 6 | 0 | 79 | 17 | 1.068 |
| AF0338-17 | 308 | 216 | 66 | 2 | 19 | 73 | 6 | 0 | 0 | 79 | 6 | 1.062 |
| AF3362-1 | 301 | 166 | 51 | 2 | 21 | 69 | 6 | 1 | 0 | 76 | 7 | 1.060 |
| AF4138-8 | 240 | 137 | 42 | 3 | 21 | 69 | 6 | 1 | 0 | 75 | 7 | 1.057 |
| AF4157-6 | 338 | 208 | 63 | 4 | 30 | 66 | 0 | 0 | 0 | 66 | 0 | 1.064 |
| AF4320-17 | 337 | 196 | 60 | 3 | 35 | 60 | 1 | 2 | 0 | 62 | 2 | 1.061 |
| AF4640-1 | 328 | 215 | 66 | 2 | 21 | 68 | 6 | 3 | 0 | 77 | 9 | 1.067 |
| B2676-2 | 160 | 83 | 25 | 7 | 40 | 50 | 3 | 1 | 0 | 54 | 4 | 1.065 |
| B2833-16 | 342 | 242 | 74 | 3 | 13 | 77 | 7 | 0 | 0 | 84 | 7 | 1.068 |
| BNC182-5 | 415 | 359 | 109 | 1 | 9 | 66 | 15 | 8 | 0 | 90 | 23 | 1.061 |
| CO098012-5R | 231 | 101 | 31 | 4 | 37 | 57 | 1 | 0 | 0 | 59 | 1 | 1.061 |
| MSQ086-3 | 409 | 265 | 81 | 4 | 19 | 65 | 9 | 4 | 0 | 78 | 13 | 1.062 |
| NY136 (Strawberry Paw) | 317 | 206 | 63 | 2 | 20 | 75 | 4 | 0 | 0 | 78 | 4 | 1.056 |
| NY148 (NYE106-4) | 403 | 304 | 93 | 3 | 18 | 70 | 6 | 3 | 0 | 79 | 9 | 1.068 |
| NY150 (NYF52-1) | 294 | 45 | 14 | 26 | 57 | 16 | 0 | 0 | 0 | 16 | 0 | 1.067 |
| NYH15-17 | 436 | 276 | 84 | 2 | 29 | 68 | 1 | 0 | 0 | 69 | 1 | 1.068 |
| *MSD*[3] | 47 | 44 | - | 2 | 8 | 10 | 7 | 5 | - | 9 | 9 | 0.0068 |
| *P Value* | *<0.001* | *<0.001* | - | *<0.001* | *<0.001* | *<0.001* | *<0.001* | *<0.001* | - | *<0.001* | *<0.001* | *<0.001* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

[4]All seed provided by Aroostook Farm, University of Maine.

Table 34. Plant growth and tuber characteristics of the 2014 NE1231 potato variety trial selections, in Hastings, FL.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP | Tuber Comments |
| Atlantic | 100 | 9 | 9-6 | 4 | 2 | 6 | 5 | 3 | 5 | 8 | |
| Chieftain | 100 | 6 | 8-9 | 4 | 1 | 2 | 7 | 3 | 5 | 6 | |
| Teton Russet | 100 | 5 | 8-5 | 3 | 2 | 5 | 3 | 5 | 7 | 8 | |
| Palisade Russet | 100 | 5 | 9 | 5 | 2 | 6 | 1 | 4 | 7 | 4 | lenticels |
| Dark Red Norland | 100 | 9 | 6 | 2 | 2 | 2 | 6 | 3 | 5 | 7 | |
| Katahdin | 100 | 6 | 8-5 | 3 | 2 | 8 | 7 | 3 | 6 | 6 | |
| Kennebec | 100 | 6 | 9 | 4 | 2 | 7 | 6 | 3 | 5 | 5 | |
| Rochdale Gold-Doree | 100 | 8 | 8-5 | 3 | 3 | 7 | 6 | 3 | 6 | 5 | |
| Snowden | 100 | 8 | 8-9 | 4 | 1 | 6 | 5 | 3 | 4 | 7 | heavy netting |
| Superior | 100 | 8 | 6 | 2 | 1 | 7 | 5 | 3 | 3 | 6 | |
| Yukon Gold | 100 | 6 | 8 | 3 | 5 | 9 | 6 | 3 | 6 | 5 | |
| AF0338-17 | 100 | 8 | 5-6 | 3 | 1 | 7 | 5 | 3 | 6 | 6 | |
| AF3362-1 | 100 | 8 | 5-8 | 3 | 2 | 5 | 4 | 6 | 5 | 6 | |
| AF4138-8 | 100 | 6 | 5 | 3 | 2 | 8 | 7 | 3 | 5 | 6 | |
| AF4157-6 | 100 | 7 | 6 | 3 | 2 | 7 | 5 | 3 | 6 | 8 | |
| AF4320-17 | 100 | 7 | 6-9 | 3 | 2 | 5 | 4 | 5 | 6 | 7 | |
| AF4640-1 | 100 | 8 | 8-5 | 3 | 1 | 8 | 7 | 3 | 6 | 6 | |
| B2676-2 | 100 | 7 | 5 | 3 | 3 | 2 | 7 | 3 | 6 | 5 | |
| B2833-16 | 100 | 8 | 5-6 | 3 | 2 | 7 | 5 | 3 | 6 | 6 | |
| BNC182-5 | 100 | 7 | 5-8 | 4 | 2 | 7 | 5 | 3 | 6 | 6 | |
| CO098012-5R | 100 | 6 | 8-5 | 3 | 2 | 2 | 8 | 3 | 6 | 8 | dark red, heavy skin set |
| MSQ086-3 | 100 | 8 | 5-8 | 3 | 2 | 8 | 7 | 3 | 6 | 7 | |
| NY136 (Strawberry Paw) | 100 | 7 | 8-5 | 3 | 3 | 2 | 7 | 3 | 7 | 6 | |
| NY148 (NYE106-4) | 100 | 7 | 8-5 | 4 | 3 | 7 | 5 | 3 | 5 | 5 | |
| NY150 (NYF52-1) | 100 | 8 | 5-6 | 3 | 1 | 8 | 7 | 3 | 5 | 8 | |
| NYH15-17 | 100 | 9 | 6 | 3 | 2 | 6 | 5 | 3 | 6 | 6 | |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 35. External and internal defects of the 2014 NE1231 potato variety trial selections in Hastings, FL.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 1 | 1 | 4 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Chieftain | 0 | 0 | 1 | 13 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Teton Russet | 9 | 1 | 0 | 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Palisade Russet | 0 | 7 | 0 | 8 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dark Red Norland | 0 | 0 | 1 | 24 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Katahdin | 0 | 0 | 1 | 9 | 10 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Kennebec | 0 | 1 | 1 | 12 | 14 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Rochdale Gold-Doree | 0 | 1 | 1 | 8 | 11 | 0 | 0 | 0 | 1 | 4 | 0 | 0 |
| Snowden | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Superior | 0 | 0 | 3 | 8 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yukon Gold | 0 | 1 | 2 | 17 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF0338-17 | 0 | 0 | 1 | 11 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF3362-1 | 1 | 0 | 0 | 27 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4138-8 | 0 | 0 | 2 | 24 | 27 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| AF4157-6 | 1 | 1 | 0 | 5 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4320-17 | 0 | 0 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AF4640-1 | 1 | 1 | 1 | 15 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2676-2 | 0 | 0 | 2 | 17 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B2833-16 | 0 | 2 | 1 | 13 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BNC182-5 | 0 | 0 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CO098012-5R | 1 | 0 | 1 | 26 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MSQ086-3 | 0 | 0 | 0 | 16 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY136 (Strawberry Paw) | 0 | 1 | 1 | 16 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY148 (NYE106-4) | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NY150 (NYF52-1) | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 6 | 0 | 0 |
| NYH15-17 | 0 | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| *MSD*[3] | 1 | 1 | 3 | 8 | 9 | - | - | - | - | 4 | - | - |
| *P Value* | *<0.001* | *<0.001* | *<0.001* | *<0.001* | *<0.001* | - | - | - | - | *0.0150* | - | - |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 13. HZPC VARIETY TRIAL, 2014

### *General Comments*

A goal of the HZPC potato trial is to identify new varieties and clones that perform well under Florida growing conditions.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 5, 2014 |
| Vine Kill Dates | May 6, 2014 |
| Harvest Date | May 20, 2014 |
| Season Length | 90 days planting to vine kill;<br>104 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 32 (Standard: Yukon Gold) |
| Number of Clones | 34 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 3 replication observational trial |
| Plot Size | 16 ft (4.8 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 43 DAP |
| Highest Total Yield | Marilyn (347 cwt/A or 38.8 T/ha) |
| Highest Marketable Yield | Satina (205 cwt/A or 22.9 T/ha) |

Table 36. Production statistics for the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| Clone | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Yukon Gold | 216 | 111 | 100 | 4 | 12 | 78 | 4 | 2 | 0 | 85 | 7 | 1.054 |
| Adora | 171 | 81 | 73 | 5 | 33 | 62 | 0 | 0 | 0 | 62 | 0 | 1.039 |
| Annabelle | 199 | 17 | 16 | 22 | 66 | 12 | 0 | 0 | 0 | 12 | 0 | 1.052 |
| Atlantic | 281 | 157 | 142 | 6 | 27 | 65 | 1 | 0 | 0 | 67 | 1 | 1.050 |
| Canberra | 158 | 76 | 68 | 10 | 34 | 53 | 3 | 0 | 0 | 56 | 3 | 1.047 |
| Carolina | 202 | 109 | 98 | 5 | 29 | 66 | 0 | 0 | 0 | 66 | 0 | 1.045 |
| Carrera | 242 | 117 | 105 | 6 | 34 | 60 | 1 | 0 | 0 | 61 | 1 | 1.049 |
| Celandine | 130 | 8 | 7 | 36 | 59 | 5 | 0 | 0 | 0 | 5 | 0 | 1.045 |
| Challenger | 246 | 36 | 32 | 13 | 48 | 32 | 7 | 0 | 0 | 39 | 7 | 1.038 |
| Chopin | 139 | 33 | 30 | 13 | 50 | 37 | 0 | 0 | 0 | 37 | 0 | 1.046 |
| Colomba | 215 | 64 | 58 | 9 | 46 | 45 | 0 | 0 | 0 | 45 | 0 | 1.040 |
| Dione | 245 | 84 | 75 | 7 | 56 | 37 | 0 | 0 | 0 | 37 | 0 | 1.048 |
| Elkton | 240 | 158 | 142 | 5 | 28 | 67 | 1 | 0 | 0 | 67 | 1 | 1.060 |
| Fabula | 158 | 88 | 79 | 4 | 22 | 72 | 2 | 0 | 0 | 74 | 2 | 1.048 |
| Gioconda | 176 | 63 | 56 | 7 | 48 | 45 | 0 | 0 | 0 | 45 | 0 | 1.047 |
| Harley Blackwell | 158 | 105 | 95 | 5 | 24 | 71 | 0 | 0 | 0 | 71 | 0 | 1.070 |
| Innovator | 101 | 41 | 37 | 24 | 30 | 46 | 0 | 0 | 0 | 46 | 0 | 1.055 |
| Ivory Russet | 123 | 39 | 35 | 9 | 45 | 46 | 0 | 0 | 0 | 46 | 0 | 1.057 |
| Leonardo | 30 | 17 | 15 | 12 | 26 | 62 | 0 | 0 | 0 | 62 | 0 | 1.056 |
| Marcy | 165 | 130 | 117 | 2 | 10 | 71 | 12 | 4 | 0 | 87 | 16 | 1.057 |
| Marilyn | 347 | 154 | 138 | 14 | 56 | 30 | 0 | 0 | 0 | 30 | 0 | 1.046 |
| Mozart | 216 | 163 | 147 | 2 | 16 | 80 | 3 | 0 | 0 | 83 | 3 | 1.043 |
| Oriana | 200 | 35 | 32 | 18 | 62 | 20 | 0 | 0 | 0 | 20 | 0 | 1.050 |
| Panamera | 237 | 55 | 49 | 18 | 56 | 25 | 0 | 0 | 0 | 25 | 0 | 1.051 |

Table 36(cont'd). Production statistics for the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| Clone | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parella | 170 | 73 | 65 | 6 | 41 | 53 | 0 | 0 | 0 | 53 | 0 | 1.046 |
| Red LaSoda | 227 | 119 | 107 | 4 | 31 | 51 | 2 | 12 | 0 | 64 | 14 | 1.054 |
| Satina | 318 | 205 | 184 | 4 | 23 | 71 | 0 | 1 | 0 | 73 | 2 | 1.048 |
| Sifra | 222 | 76 | 68 | 6 | 53 | 40 | 1 | 0 | 0 | 41 | 1 | 1.047 |
| Snowbird | 188 | 89 | 80 | 4 | 27 | 69 | 1 | 0 | 0 | 69 | 1 | 1.054 |
| Sylana | 242 | 102 | 92 | 9 | 38 | 52 | 0 | 1 | 0 | 53 | 1 | 1.051 |
| Taurus | 141 | 27 | 24 | 23 | 56 | 20 | 0 | 0 | 0 | 20 | 0 | 1.050 |
| Vivaldi | 188 | 39 | 35 | 9 | 57 | 34 | 0 | 0 | 0 | 34 | 0 | 1.043 |
| BIE 02- 133 | 173 | 44 | 40 | 9 | 61 | 30 | 0 | 0 | 0 | 30 | 0 | 1.051 |
| BIE 02-1612 | 282 | 39 | 35 | 21 | 64 | 15 | 0 | 0 | 0 | 15 | 0 | 1.049 |
| HER 01- 61 | 181 | 45 | 41 | 16 | 56 | 29 | 0 | 0 | 0 | 29 | 0 | 1.057 |
| HOT 02-7001 | 130 | 2 | 2 | 50 | 48 | 1 | 0 | 0 | 0 | 1 | 0 | 1.051 |
| HZ- 01- 899 | 199 | 111 | 100 | 4 | 26 | 66 | 2 | 2 | 0 | 70 | 4 | 1.050 |
| HZ- 97- 185 | 182 | 58 | 52 | 10 | 56 | 34 | 0 | 0 | 0 | 34 | 0 | 1.062 |
| HZ- 99- 482 | 93 | 27 | 24 | 6 | 48 | 45 | 0 | 0 | 0 | 45 | 0 | 1.055 |
| HZC 01-6087 | 104 | 61 | 55 | 2 | 10 | 65 | 17 | 6 | 0 | 88 | 23 | 1.062 |
| HZC 04-6029 | 215 | 76 | 68 | 11 | 51 | 36 | 2 | 0 | 0 | 39 | 2 | 1.048 |
| HZC 04-6037 | 152 | 21 | 19 | 18 | 69 | 12 | 2 | 0 | 0 | 13 | 2 | 1.053 |
| HZC 05-6026 | 235 | 92 | 83 | 4 | 51 | 45 | 0 | 0 | 0 | 45 | 0 | 1.052 |
| HZC 05-6054 | 212 | 93 | 83 | 4 | 36 | 60 | 0 | 0 | 0 | 60 | 0 | 1.049 |
| HZC 05-6067 | 140 | 11 | 10 | 35 | 57 | 8 | 0 | 0 | 0 | 8 | 0 | 1.052 |
| HZC 06-6077 | 48 | 15 | 13 | 10 | 26 | 64 | 0 | 0 | 0 | 64 | 0 | 1.030 |
| HZC 06-6082 | 157 | 56 | 51 | 31 | 41 | 28 | 0 | 0 | 0 | 28 | 0 | 1.048 |
| HZC 06-6090 | 45 | 16 | 14 | 13 | 32 | 55 | 0 | 0 | 0 | 55 | 0 | 1.043 |

Table 36(cont'd). Production statistics for the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| Clone | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HZC 06-6109 | 155 | 30 | 27 | 16 | 61 | 23 | 0 | 0 | 0 | 23 | 0 | 1.043 |
| HZC 06-6117 | 201 | 107 | 96 | 6 | 33 | 62 | 0 | 0 | 0 | 62 | 0 | 1.048 |
| HZC 07-6039 | 104 | 36 | 32 | 5 | 59 | 34 | 2 | 0 | 0 | 35 | 2 | 1.057 |
| HZC 07-6040 | 278 | 113 | 101 | 8 | 40 | 52 | 0 | 0 | 0 | 52 | 0 | 1.053 |
| HZC 07-6043 | 290 | 131 | 118 | 4 | 46 | 50 | 0 | 0 | 0 | 50 | 0 | 1.043 |
| HZC 07-6047 | 123 | 46 | 41 | 17 | 44 | 39 | 0 | 0 | 0 | 39 | 0 | 1.036 |
| HZC 07-6049 | 156 | 41 | 37 | 10 | 51 | 39 | 0 | 0 | 0 | 39 | 0 | 1.046 |
| HZC 07-6071 | 165 | 66 | 59 | 3 | 27 | 65 | 3 | 1 | 0 | 69 | 5 | 1.035 |
| HZC 07-6077 | 191 | 86 | 78 | 7 | 33 | 60 | 0 | 0 | 0 | 60 | 0 | 1.042 |
| HZC 07-6083 | 79 | 2 | 2 | 45 | 49 | 6 | 0 | 0 | 0 | 6 | 0 | 1.056 |
| HZC 07-6093 | 105 | 9 | 9 | 16 | 72 | 12 | 0 | 0 | 0 | 12 | 0 | 1.052 |
| HZC 07-6099 | 129 | 43 | 38 | 7 | 54 | 40 | 0 | 0 | 0 | 40 | 0 | 1.043 |
| HZC 07-6101 | 157 | 23 | 21 | 19 | 64 | 17 | 0 | 0 | 0 | 17 | 0 | 1.047 |
| HZC 07-6104 | 65 | 6 | 6 | 33 | 53 | 14 | 0 | 0 | 0 | 14 | 0 | 1.039 |
| HZC 07-6111 | 277 | 64 | 57 | 11 | 65 | 23 | 1 | 0 | 0 | 23 | 1 | 1.048 |
| HZC 07-6137 | 79 | 23 | 21 | 14 | 65 | 20 | 0 | 0 | 0 | 20 | 0 | 1.048 |
| HZC 07-6157 | 175 | 122 | 110 | 4 | 23 | 71 | 2 | 0 | 0 | 74 | 2 | 1.053 |
| HZD 99- 979 | 35 | 4 | 4 | 21 | 72 | 7 | 0 | 0 | 0 | 7 | 0 | 1.062 |
| *MSD*[3] | 205 | 72 | | 14 | 24 | 28 | 5 | - | - | 27 | 7 | 0.044 |
| *P Value* | *0.0079* | *<0.001* | | *<0.001* | *<0.001* | *<0.001* | *<0.001* | *ns* | *ns* | *<0.001* | *<0.001* | *0.0100* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 37. Plant growth and tuber characteristics of the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP |
| Yukon Gold | 85 | 5 | 8 | 4 | 3 | 7 | 7 | 3 | 6 | 7 |
| Adora | 67 | 6 | 6 | 4 | 3 | 9 | 8 | 3 | 6 | 7 |
| Annabelle | 115 | 6 | 5 | 5 | 4 | 9 | 7 | 6 | 7 | 5 |
| Atlantic | 133 | 6 | 9 | 4 | 2 | 6 | 5 | 3 | 6 | 7 |
| Canberra | 73 | 5 | 8-9 | 4 | 4 | 3 | 8 | 4 | 6 | 7 |
| Carolina | 71 | 5 | 6-9 | 5 | 1 | 2 | 7 | 3 | 6 | 6 |
| Carrera | 102 | 6 | 8 | 5 | 3 | 8 | 8 | 3 | 5 | 6 |
| Celandine | 63 | 5 | 6 | 4 | 4 | 9 | 7 | 7 | 7 | 4 |
| Challenger | 27 | 5 | 5-8 | 6 | 3 | 9 | 6 | 5 | 7 | 4 |
| Chopin | 71 | 5 | 5-8 | 5 | 3 | 9 | 6 | 4 | 6 | 6 |
| Colomba | 117 | 6 | 5 | 4 | 4 | 9 | 6 | 3 | 7 | 6 |
| Dione | 148 | 5 | 9 | 5 | 2 | 6 | 3 | 5 | 6 | 4 |
| Elkton | 104 | 6 | 9-6 | 5 | 2 | 6 | 5 | 3 | 7 | 5 |
| Fabula | 81 | 6 | 8 | 5 | 3 | 9 | 7 | 3 | 4 | 6 |
| Gioconda | 81 | 5 | 8 | 5 | 3 | - | 7 | 5 | 6 | 6 |
| Harley Blackwell | 94 | 7 | 8 | 5 | 1 | 6 | 5 | 2 | 7 | 8 |
| Innovator | 38 | 4 | 7 | 7 | 3 | 6 | 4 | 6 | 6 | 4 |
| Ivory Russet | 85 | 4 | 8 | 5 | 1 | 6 | 4 | 5 | 7 | 5 |
| Leonardo | 15 | 5 | 8-6 | 6 | 5 | 5 | 4 | 3 | 6 | 3 |
| Marcy | 56 | 5 | 6-9 | 6 | 1 | 6 | 5 | 3 | 6 | 5 |
| Marilyn | 96 | 6 | 6-9 | 5 | 3 | 9 | 8 | 6 | 5 | 4 |
| Mozart | 60 | 6 | 8 | 6 | 4 | 2 | 8 | 3 | 7 | 6 |
| Oriana | 88 | 6 | 8-5 | 5 | 3 | - | 7 | 3 | 7 | 6 |
| Panamera | 104 | 6 | 8-5 | 6 | 3 | 9 | 7 | 3 | 6 | 8 |

Table 37(cont'd). Plant growth and tuber characteristics of the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP |
| Parella | 67 | 5 | 8-6 | 5 | 1 | 8 | 8 | 3 | 6 | 5 |
| Red LaSoda | 119 | 6 | 9-6 | 4 | 2 | 2 | 7 | 3 | 5 | 6 |
| Satina | 108 | 6 | 8 | 5 | 4 | 9 | 7 | 3 | 5 | 8 |
| Sifra | 98 | 5 | 9 | 6 | 1 | 8 | 7 | 3 | 5 | 6 |
| Snowbird | 81 | 5 | 6-9 | 5 | 1 | 8 | 8 | 3 | 7 | 6 |
| Sylana | 85 | 6 | 8 | 7 | 3 | 9 | 8 | 3 | 6 | 6 |
| Taurus | 85 | 5 | 9 | 6 | 3 | 9 | 8 | 3 | 6 | 4 |
| Vivaldi | 94 | 6 | 8 | 4 | 3 | 9 | 8 | 4 | 6 | 7 |
| BIE 02- 133 | 88 | 5 | 8 | 4 | 9 | 1 | 6 | 6 | 5 | 5 |
| BIE 02-1612 | 125 | 6 | 9-6 | 5 | 2 | 8 | 7 | 5 | 7 | 7 |
| HER 01- 61 | 85 | 5 | 9-6 | 6 | 3 | 9 | 7 | 4 | 7 | 6 |
| HOT 02-7001 | 144 | 5 | 5 | 4 | 9 | 1 | 8 | 6 | 7 | 4 |
| HZ- 01- 899 | 63 | 6 | 8 | 5 | 3 | 9 | 7 | 3 | 6 | 7 |
| HZ- 97- 185 | 108 | 6 | 8-5 | 5 | 4 | 9 | 6 | 4 | 5 | 8 |
| HZ- 99- 482 | 48 | 5 | 8 | 5 | 3 | 2 | 8 | 6 | 7 | 5 |
| HZC 01-6087 | 35 | 6 | 8 | 7 | 3 | - | - | - | - | 5 |
| HZC 04-6029 | 127 | 6 | 8 | 4 | 3 | 5 | 1 | 4 | 6 | 5 |
| HZC 04-6037 | 67 | 5 | 5-8 | 6 | 4 | 2 | 7 | 6 | 7 | 6 |
| HZC 05-6026 | 98 | 4 | 8 | 5 | 1 | 8 | 7 | 4 | 7 | 5 |
| HZC 05-6054 | 73 | 6 | 8 | 5 | 3 | 9 | 8 | 3 | 7 | 7 |
| HZC 05-6067 | 125 | 4 | 5 | 6 | 3 | 5 | 6 | 5 | 7 | 4 |
| HZC 06-6077 | 13 | 5 | 5 | 5 | 1 | 8 | 8 | 3 | 5 | 4 |
| HZC 06-6082 | 85 | 5 | 8 | 5 | 5 | 2 | 8 | 5 | 6 | 5 |
| HZC 06-6090 | 34 | 5 | 5-8 | 6 | 5 | - | - | - | - | - |

Table 37(cont'd). Plant growth and tuber characteristics of the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP |
| HZC 06-6109 | 83 | 5 | 5 | 5 | 3 | 9 | 8 | 3 | 6 | 7 |
| HZC 06-6117 | 75 | 6 | 9 | 6 | 1 | 5 | 7 | 4 | 6 | 6 |
| HZC 07-6039 | 103 | 6 | 6 | 4 | 1 | - | - | - | - | 6 |
| HZC 07-6040 | 119 | 6 | 6 | 3 | 1 | 2 | 6 | 2 | 5 | 8 |
| HZC 07-6043 | 142 | 6 | 6-9 | 3 | 1 | 2 | 7 | 3 | 5 | 7 |
| HZC 07-6047 | 58 | 6 | 5 | 5 | 5 | 2 | 6 | 3 | 6 | 5 |
| HZC 07-6049 | 77 | 6 | 6-9 | 5 | 4 | 2 | 8 | 3 | 6 | 6 |
| HZC 07-6071 | 67 | 5 | 8-5 | 5 | 3 | 9 | 8 | 3 | 7 | 6 |
| HZC 07-6077 | 73 | 6 | 5-8 | 5 | 1 | 8 | 7 | 3 | 6 | 5 |
| HZC 07-6083 | 83 | 6 | 5 | 4 | 4 | 9 | 8 | cresent | 6 | 6 |
| HZC 07-6093 | 69 | 6 | 5-7 | 4 | 1 | - | - | - | - | 6 |
| HZC 07-6099 | 77 | 6 | 9 | 3 | 4 | 9 | 6 | 3 | 6 | 7 |
| HZC 07-6101 | 96 | 5 | 8-9 | 4 | 4 | 9 | 6 | 3 | 6 | 7 |
| HZC 07-6104 | 31 | 3 | 8 | 7 | 4 | - | - | - | - | - |
| HZC 07-6111 | 125 | 6 | 5-8 | 4 | 4 | 9 | 6 | 3 | 6 | 8 |
| HZC 07-6137 | 31 | 5 | 8 | 5 | 4 | 9 | 8 | 4 | 7 | 7 |
| HZC 07-6157 | 81 | 6 | 5 | 5 | 4 | 2 | 7 | 3 | 5 | 6 |
| HZD 99- 979 | 23 | 5 | 8-9 | 7 | 4 | - | - | - | - | 5 |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 38. External and internal defects of the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Yukon Gold | 0 | 0 | 0 | 38 | 38 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Adora | 7 | 2 | 1 | 6 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annabelle | 0 | 1 | 1 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Atlantic | 0 | 1 | 0 | 14 | 15 | 0 | 0 | 0 | 2 | 3 | 0 | 0 |
| Canberra | 1 | 10 | 0 | 7 | 17 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Carolina | 0 | 5 | 0 | 10 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Carrera | 0 | 2 | 1 | 13 | 16 | 0 | 0 | 17 | 10 | 0 | 0 | 0 |
| Celandine | 2 | 2 | 0 | 5 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Challenger | 3 | 0 | 26 | 1 | 30 | 2 | 0 | 0 | 2 | 2 | 0 | 0 |
| Chopin | 0 | 0 | 3 | 8 | 11 | 0 | 0 | 0 | 0 | 9 | 2 | 0 |
| Colomba | 0 | 0 | 1 | 9 | 11 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| Dione | 1 | 2 | 0 | 4 | 7 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Elkton | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Fabula | 2 | 1 | 0 | 23 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gioconda | 0 | 1 | 5 | 3 | 9 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Harley Blackwell | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Innovator | 0 | 14 | 0 | 3 | 17 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Ivory Russet | 0 | 3 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Leonardo | 0 | 0 | 8 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marcy | 1 | 1 | 3 | 6 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Marilyn | 0 | 3 | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mozart | 1 | 2 | 0 | 7 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Oriana | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Panamera | 6 | 1 | 1 | 2 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 38(cont'd). External and internal defects of the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Parella | 1 | 2 | 0 | 14 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red LaSoda | 0 | 2 | 1 | 27 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Satina | 0 | 9 | 0 | 3 | 12 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Sifra | 1 | 1 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Snowbird | 0 | 4 | 0 | 23 | 27 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| Sylana | 3 | 3 | 1 | 10 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Taurus | 10 | 8 | 0 | 1 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vivaldi | 0 | 1 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BIE 02- 133 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 5 | 0 |
| BIE 02-1612 | 0 | 6 | 0 | 2 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HER 01- 61 | 1 | 1 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| HOT 02-7001 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZ- 01- 899 | 1 | 3 | 0 | 16 | 20 | 2 | 0 | 0 | 0 | 8 | 3 | 2 |
| HZ- 97- 185 | 0 | 1 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZ- 99- 482 | 0 | 16 | 4 | 8 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 01-6087 | 0 | 2 | 2 | 29 | 32 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 04-6029 | 0 | 0 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 04-6037 | 0 | 5 | 0 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 05-6026 | 1 | 0 | 1 | 12 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 05-6054 | 0 | 7 | 1 | 17 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 05-6067 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| HZC 06-6077 | 0 | 17 | 5 | 26 | 49 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| HZC 06-6082 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| HZC 06-6090 | 0 | 11 | 8 | 12 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 38(cont'd). External and internal defects of the 2014 HZPC variety trial potato selections grown in Hastings, Florida.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| HZC 06-6109 | 0 | 5 | 0 | 20 | 25 | 0 | 0 | 2 | 13 | 7 | 0 | 0 |
| HZC 06-6117 | 0 | 3 | 1 | 8 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6039 | 0 | 1 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6040 | 0 | 1 | 0 | 18 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6043 | 0 | 1 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6047 | 1 | 0 | 0 | 6 | 6 | 0 | 0 | 3 | 5 | 2 | 0 | 0 |
| HZC 07-6049 | 1 | 1 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6071 | 3 | 2 | 4 | 42 | 51 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| HZC 07-6077 | 0 | 11 | 0 | 12 | 23 | 7 | 0 | 0 | 0 | 3 | 0 | 0 |
| HZC 07-6083 | 0 | 5 | 0 | 3 | 8 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| HZC 07-6093 | 2 | 0 | 0 | 49 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6099 | 0 | 0 | 1 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6101 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6104 | 0 | 1 | 5 | 6 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6111 | 0 | 1 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZC 07-6137 | 0 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 7 | 0 | 0 | 0 |
| HZC 07-6157 | 0 | 1 | 1 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HZD 99- 979 | 0 | 0 | 0 | 6 | 6 | 0 | 0 | 0 | 15 | 0 | 0 | 0 |
| *MSD*[3] | 5 | 12 | - | 13 | 18 | 3 | - | - | 7 | - | - | - |
| *P Value* | *<0.001* | *<0.001* | *ns* | *<0.001* | *<0.001* | *0.0200* | *ns* | *ns* | *<0.001* | *ns* | *ns* | *ns* |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 14. NORIKA VARIETY TRIAL, 2014

### *General Comments*

A goal of the Norika Variety trial is to identify a short-season tablestock potato variety with better production and quality characteristics.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 14, 2014 |
| Vine Kill Date | May 12, 2014 |
| Harvest Date | June 3, 2014 |
| Season Length | 87 days planting to vine kill,<br>109 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 16 (Standard: Atlantic) |
| Number of Clones | 3 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 4 |
| Plot Size | 16 ft (4.9 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 35 DAP |
| Highest Total Yield | Agila (438 cwt or 49.0 T/ha) |
| Highest Marketable Yield | Agila (228 cwt or 25.5 T/ha) |
| Highest Appearance Rating | Inara (8.0, very good) |

Table 39. Production statistics for the 2014 Norika Variety Trial potato selections.

| Clone | Seed Source | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Size Distribution by Class (%)[2] C | B | A1 | A2 | A3 | A4 | Size Class Range (%) A1 to A3 | Size Class Range (%) A2 to A3 | Specific Gravity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | MFX | 300 | 210 | 100 | 3 | 17 | 73 | 6 | 0 | 0 | 79 | 6 | 1.074 |
| LaChipper | MFX | 268 | 161 | 77 | 6 | 22 | 68 | 2 | 2 | 0 | 72 | 4 | 1.060 |
| Yukon Gold | MFX | 316 | 154 | 73 | 5 | 24 | 68 | 3 | 0 | 0 | 71 | 3 | 1.068 |
| Agila | Norika | 438 | 228 | 109 | 4 | 37 | 57 | 2 | 0 | 0 | 59 | 2 | 1.049 |
| Alegria | Norika | 391 | 203 | 97 | 6 | 39 | 55 | 0 | 0 | 0 | 55 | 0 | 1.057 |
| Baltic Cream | Norika | 314 | 42 | 20 | 25 | 62 | 13 | 0 | 0 | 0 | 13 | 0 | 1.065 |
| Cascada | Norika | 301 | 50 | 24 | 30 | 53 | 17 | 0 | 0 | 0 | 17 | 0 | 1.060 |
| Fidelia | Norika | 360 | 137 | 65 | 6 | 53 | 41 | 0 | 0 | 0 | 41 | 0 | 1.047 |
| Gasora | Norika | 250 | 31 | 15 | 26 | 61 | 13 | 0 | 0 | 0 | 13 | 0 | 1.062 |
| Granola | Norika | 399 | 191 | 91 | 7 | 43 | 51 | 0 | 0 | 0 | 51 | 0 | 1.045 |
| Inara | Norika | 370 | 101 | 48 | 8 | 62 | 29 | 1 | 0 | 0 | 30 | 1 | 1.057 |
| Kea | Norika | 283 | 149 | 71 | 6 | 33 | 57 | 3 | 0 | 0 | 60 | 3 | 1.067 |
| Smiley | Norika | 357 | 155 | 74 | 7 | 46 | 46 | 1 | 0 | 0 | 47 | 1 | 1.060 |
| Soraya | Norika | 366 | 173 | 82 | 6 | 48 | 43 | 3 | 0 | 0 | 46 | 3 | 1.055 |
| Sprint | Norika | 310 | 97 | 46 | 8 | 46 | 45 | 0 | 0 | 0 | 45 | 0 | 1.058 |
| US Blue | Norika | 280 | 34 | 16 | 14 | 74 | 12 | 0 | 0 | 0 | 12 | 0 | 1.059 |
| BO 14 AG | Norika | 398 | 111 | 53 | 12 | 56 | 32 | 0 | 0 | 0 | 32 | 0 | 1.052 |
| BO 15 AL | Norika | 390 | 118 | 56 | 15 | 52 | 33 | 0 | 0 | 0 | 33 | 0 | 1.061 |
| BO 15 V | Norika | 415 | 124 | 59 | 9 | 60 | 32 | 0 | 0 | 0 | 32 | 0 | 1.053 |
| *MSD*[3] | | 48 | 54 | | 3 | 11 | 11 | 4 | 1 | - | 10 | 4 | 0 |
| *P Value* | | *<0.0001* | *<0.0001* | | *<0.0001* | *<0.0001* | *<0.0001* | *0.0071* | *0.0010* | - | *<0.0001* | *0.0064* | *<0.0001* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 40. Plant growth and tuber characteristics of the 2014 Norika Variety Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP |
| Atlantic | 100 | 7 | 6 | 3 | 2 | 6 | 5 | 3 | 5 | 7 |
| LaChipper | 100 | 6 | 6 | 3 | 1 | 8 | 7 | 3 | 3 | 7 |
| Yukon Gold | 100 | 6 | 8 | 3 | 4 | 9 | 7 | 3 | 6 | 6 |
| Agila | 100 | 7 | 5 | 3 | 4 | 9 | 7 | 6 | 6 | 7 |
| Alegria | 100 | 6 | 6 | 3 | 5 | 9 | 6 | 4 | 5 | 6 |
| Baltic Cream | 100 | 6 | 5-8 | 4 | 1 | 8 | 6 | 3 | 6 | 5 |
| Cascada | 100 | 5 | 5-6 | 4 | 5 | 9 | 7 | 3 | 5 | 5 |
| Fidelia | 100 | 5 | 5 | 3 | 5 | 9 | 7 | 4 | 6 | 6 |
| Gasora | 100 | 7 | 6-3 | 3 | 5 | 3 | 6 | 4 | 6 | 4 |
| Granola | 100 | 5 | 8 | 3 | 3 | 7 | 5 | 3 | 6 | 5 |
| Inara | 100 | 6 | 5-8 | 2 | 4 | 9 | 6 | 3 | 6 | 8 |
| Kea | 100 | 6 | 5 | 3 | 3 | 6 | 5 | 3 | 6 | 6 |
| Smiley | 100 | 8 | 5-8 | 3 | 5 | 3 | 6 | 3 | 7 | 5 |
| Soraya | 100 | 6 | 5-6 | 3 | 5 | 9 | 6 | 3 | 7 | 7 |
| Sprint | 100 | 6 | 6 | 3 | 2 | 8 | 6 | 3 | 5 | 4 |
| US Blue | 100 | 6 | 5-6 | 3 | 9-1 | 1 | 6 | 4 | 5 | 5 |
| BO 14 AG | 100 | 7 | 6 | 3 | 1 | 2 | 6 | 6 | 6 | 5 |
| BO 15 AL | 100 | 7 | 5-6 | 3 | 1 | 9 | 6 | 3 | 6 | 6 |
| BO 15 V | 100 | 7 | 5 | 3 | 1 | 3 | 6 | 6 | 6 | 4 |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 41. External and internal defects of the 2014 Norika Variety Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 1 | 0 | 11 | 12 | 0 | 0 | 0 | 4 | 3 | 0 | 0 |
| LaChipper | 0 | 2 | 1 | 16 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yukon Gold | 0 | 0 | 0 | 30 | 31 | 0 | 0 | 3 | 0 | 3 | 0 | 0 |
| Agila | 0 | 1 | 0 | 11 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Alegria | 0 | 2 | 0 | 5 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baltic Cream | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cascada | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fidelia | 0 | 3 | 0 | 6 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Gasora | 0 | 1 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Granola | 0 | 5 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Inara | 0 | 0 | 0 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kea | 0 | 0 | 0 | 12 | 12 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Smiley | 0 | 1 | 0 | 12 | 13 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Soraya | 0 | 2 | 0 | 8 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sprint | 1 | 2 | 0 | 29 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| US Blue | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BO 14 AG | 0 | 3 | 1 | 10 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BO 15 AL | 0 | 1 | 1 | 6 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BO 15 V | 0 | 1 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *MSD*[3] | 0 | 2 | 1 | 8 | 8 | - | - | - | 2 | 4 | - | - |
| *P Value* | *<0.0001* | *0.0009* | *0.0247* | *<0.0001* | *<0.0001* | *0.4747* | *0.4143* | *0.4440* | *0.0057* | *0.2681* | - | - |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# CHAPTER 15. CANADIAN INDUSTRIES VARIETY TRIAL, 2014

### *General Comments*

A goal of the Canadian Industries potato variety trial is to identify varieties and clones that will perform well under Florida growing conditions.

***Planting Information***

| | |
|---|---|
| Planting Site | PWACS - Hastings Farm, Hastings, FL |
| Planting Date | February 5, 2014 |
| Vine Kill Date | May 6, 2014 |
| Harvest Date | May 20, 2014 |
| Season Length | 90 days planting to vine kill;<br>104 days planting to harvest |
| Fertilizer Program | Pre-plant, 14-6-12 (100 lb/acre N);<br>Side-dress, 14-0-12 (130 lb/acre N) |
| Irrigation Program | seepage |

***Experimental Design***

| | |
|---|---|
| Number of Varieties | 6 (Standard: Atlantic) |
| Number of Clones | 6 |
| Within Row Spacing | 8 in (20.3 cm) |
| Between Row Spacing | 40 in (1.02 m) |
| Replications | 4 |
| Plot Size | 16 ft (4.9 m) |

***Production Statistics***

| | |
|---|---|
| Early Vigor Ratings | 43 DAP |
| Highest Total Yield | AR2008-12 (308 cwt or 34.5 T/ha) |
| Highest Marketable Yield | Atlantic (153 cwt or 17.1 T/ha) |
| Highest Appearance Rating | Goldrush, Yukon Gold, AR2013-02 (7.0, good) |

Table 42. Production statistics for the 2014 Canadian Industry Variety Trial potato selections

| | | Total | Marketable Yield[1] | | Size Distribution by Class (%)[2] | | | | | | Size Class Range (%) | | Specific |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | Seed Source | Yield (cwt/A) | (cwt/A) | % of standard | C | B | A1 | A2 | A3 | A4 | A1 to A3 | A2 to A3 | Gravity |
| Atlantic | MFX | 204 | 153 | 100 | 3 | 15 | 73 | 6 | 2 | 0 | 82 | 9 | 1.068 |
| LaChipper | MFX | 170 | 89 | 58 | 7 | 26 | 65 | 1 | 1 | 0 | 66 | 1 | 1.059 |
| Goldrush | MFX | 207 | 82 | 54 | 13 | 41 | 46 | 0 | 0 | 0 | 46 | 0 | 1.049 |
| Red LaSoda | MFX | 90 | 53 | 35 | 4 | 19 | 62 | 15 | 0 | 0 | 77 | 15 | 1.052 |
| Yukon Gold | MFX | 203 | 146 | 96 | 3 | 16 | 72 | 7 | 3 | 0 | 81 | 9 | 1.064 |
| Bristol Pride | CIT | 254 | 87 | 57 | 7 | 49 | 45 | 0 | 0 | 0 | 45 | 0 | 1.054 |
| AR2008-12 | CIT | 308 | 140 | 92 | 9 | 42 | 48 | 0 | 0 | 0 | 49 | 0 | 1.055 |
| AR2008-13 | CIT | 250 | 104 | 68 | 10 | 44 | 46 | 0 | 0 | 0 | 46 | 0 | 1.060 |
| AR2013-02 | CIT | 287 | 145 | 95 | 5 | 44 | 51 | 0 | 0 | 0 | 51 | 0 | 1.061 |
| AR2013-09 | CIT | 196 | 91 | 59 | 6 | 45 | 49 | 0 | 0 | 0 | 49 | 0 | 1.063 |
| AR2013-11 | CIT | 144 | 77 | 51 | 10 | 32 | 50 | 7 | 0 | 0 | 57 | 7 | 1.059 |
| AR2013-13 | CIT | 200 | 92 | 60 | 7 | 29 | 63 | 0 | 1 | 0 | 64 | 1 | 1.051 |
| *MSD*[3] | | 128 | 66 | - | 10 | 21 | - | - | - | - | 23 | - | 0.0052 |
| *P Value* | | *0.0196* | *0.0126* | - | *0.1396* | *0.0270* | *ns* | *ns* | *ns* | *ns* | *0.0180* | *ns* | *<0.001* |

[1]Marketable Yield: size classes A1 to A3.

[2]Size classes: C = 0.5 to 1.5" , B = 1.5 to 1.88", A1 = 1.88 to 2.5", A2 = 2.5 to 3.25", A3 = 3.25 to 4", A4 = >4"

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

Table 43. Plant growth and tuber characteristics of the 2014 Canadian Industry Variety Trial potato selections.

| | Plant Growth Characteristics[1] | | | | Tuber Characteristics[2] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Clone | % Stand | Early Vigor | Vine Type | Vine Maturity | IFC | SC | ST | TS | ED | APP |
| Atlantic | 55 | 6 | 9 | 5 | 2 | 6 | 5 | 3 | 6 | 6 |
| LaChipper | 64 | 6 | 9 | 5 | 1 | 8 | 7 | 3 | 5 | 6 |
| Goldrush | 76 | 5 | 9 | 4 | 1 | 4 | 3 | 6 | 7 | 7 |
| Red LaSoda | 39 | 5 | 9 | 5 | 1 | 2 | 7 | 3 | 4 | 5 |
| Yukon Gold | 53 | 6 | 8 | 5 | 4 | 6 | 6 | 3 | 5 | 7 |
| Bristol Pride | 85 | 6 | 9 | 4 | 1 | 8 | 6 | 6 | 6 | 4 |
| AR2008-12 | 96 | 7 | 6 | 4 | 1 | 2 | 7 | 3 | 6 | 6 |
| AR2008-13 | 96 | 6 | 8 | 5 | 1 | 2 | 7 | 4 | 5 | 5 |
| AR2013-02 | 90 | 6 | 9 | 4 | 1 | 2 | 7 | 3 | 7 | 7 |
| AR2013-09 | 79 | 6 | 9 | 4 | 3 | 2 | 7 | 3 | 6 | 6 |
| AR2013-11 | 42 | 5 | 9 | 5 | 1 | 4 | 3 | 6 | 6 | 6 |
| AR2013-13 | 99 | 5 | 8 | 5 | 1 | 3 | 7 | 4 | 5 | 5 |

[1]See rating system outlined in Table 1 (page 10).

[2]See rating system outlined in Table 2 (page 11).

Table 44. External and internal defects of the 2014 Canadian Industry Variety Trial potato selections.

| | % External Tuber Defects | | | | | % Internal Defects[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Growth | Mis- | Sun- | Rotten | Total | | | | | Brown Center | | |
| Clone | Cracks | shapen | burned | & misc. | Culls[1] | HH | BR | CRS | IHN | L | M | H |
| Atlantic | 0 | 2 | 1 | 5 | 8 | 5 | 0 | 0 | 3 | 3 | 5 | 3 |
| LaChipper | 0 | 8 | 1 | 7 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Goldrush | 0 | 6 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red LaSoda | 0 | 8 | 0 | 14 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Yukon Gold | 1 | 2 | 1 | 7 | 11 | 0 | 0 | 0 | 3 | 10 | 3 | 0 |
| Bristol Pride | 0 | 0 | 1 | 12 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AR2008-12 | 0 | 3 | 1 | 4 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| AR2008-13 | 0 | 1 | 0 | 8 | 9 | 0 | 0 | 0 | 0 | 9 | 0 | 0 |
| AR2013-02 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 5 | 0 | 0 |
| AR2013-09 | 0 | 0 | 0 | 5 | 6 | 0 | 0 | 0 | 20 | 2 | 0 | 0 |
| AR2013-11 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AR2013-13 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| *MSD*[3] | - | - | - | - | 12 | 2 | - | - | 4 | 6 | 2 | - |
| *P Value* | *ns* | *ns* | *ns* | *ns* | *0.0200* | *0.0140* | *ns* | *ns* | *<0.001* | *0.0016* | *0.0060* | *ns* |

[1]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[2]Percent tubers; HH, hollow heart; BR, brown rot; CRS, corky ring spot; IHN, internal heat necrosis.

Brown Center: L = Light, M = Moderate, H = Heavy

[3]Means separated within columns by Tukey's Studentized Range (HSD) Test.

# APPENDIX 1. POTATO SEASON WEATHER DATA FOR NORTH FLORIDA, 2014

Weather data obtained from the Florida Automated Weather Network (FAWN). FAWN provides up-to-date weather information through a system of automated weather stations distributed throughout the state of Florida. An automated FAWN weather station is located at the University of Florida/IFAS PWACS Research and Demonstration farm in Hastings, FL. Current and historical weather data can be obtained for many sites in Florida including Hastings at the FAWN website: http://fawn.ifas.ufl.edu/

Table 45. Daily rainfall amounts (inches) at the UF/IFAS Hastings Demonstration Unit Research Farm at Hastings, FL Jan 1 - June 30, 2014.

| Day | January | February | March | April | May | June |
|---|---|---|---|---|---|---|
| 1 | 0.68 | 0.02 | 0.00 | 0.00 | 0.09 | 0.00 |
| 2 | 0.35 | 0.00 | 0.00 | 0.00 | 0.85 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.14 | 0.03 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.03 | 0.96 | 0.11 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 1.00 | 0.00 | 0.25 | 0.00 | 0.02 |
| 9 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 10 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 11 | 0.18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 |
| 12 | 0.00 | 0.43 | 0.11 | 0.00 | 0.00 | 0.26 |
| 13 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.51 |
| 14 | 0.96 | 0.00 | 0.00 | 0.56 | 0.00 | 0.03 |
| 15 | 0.00 | 0.03 | 0.00 | 0.50 | 1.36 | 0.02 |
| 16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 |
| 17 | 0.00 | 0.00 | 2.46 | 0.00 | 0.00 | 0.00 |
| 18 | 0.00 | 0.00 | 0.23 | 0.49 | 0.00 | 0.00 |
| 19 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 |
| 20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21 | 0.00 | 0.33 | 0.00 | 0.00 | 0.00 | 0.79 |
| 22 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.32 |
| 23 | 0.00 | 0.88 | 0.00 | 0.00 | 0.00 | 0.44 |
| 24 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.19 |
| 25 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | 0.00 | 0.86 | 0.00 | 0.00 | 0.03 | 0.00 |
| 27 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29 | 0.34 | | 0.75 | 0.91 | 0.17 | 0.87 |
| 30 | 0.57 | | 0.00 | 0.57 | 0.00 | 0.00 |
| 31 | 0.03 | | 0.00 | | 0.00 | |
| Total | 3.30 | 5.14 | 3.67 | 3.29 | 2.64 | 3.60 |

Table 46. Daily Maximum and Minimum Temperatures ($^{o}$F) at the UF/IFAS Hastings Demonstration Unit Research Farm at Hastings, FL Jan 1 - June 30, 2014.

| | January | | February | | March | | April | | May | | June | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| 1 | 62 | 52 | 74 | 53 | 71 | 49 | 81 | 47 | 85 | 66 | 84 | 70 |
| 2 | 66 | 57 | 70 | 59 | 76 | 50 | 84 | 51 | 70 | 63 | 83 | 65 |
| 3 | 56 | 35 | 82 | 63 | 80 | 53 | 86 | 51 | 65 | 57 | 82 | 62 |
| 4 | 60 | 42 | 80 | 61 | 66 | 50 | 83 | 57 | 81 | 54 | 87 | 60 |
| 5 | 75 | 53 | 79 | 68 | 56 | 50 | 82 | 62 | 89 | 56 | 90 | 62 |
| 6 | 68 | 39 | 68 | 47 | 63 | 51 | 85 | 65 | 89 | 59 | 93 | 68 |
| 7 | 41 | 28 | 53 | 47 | 51 | 44 | 88 | 63 | 88 | 59 | 89 | 72 |
| 8 | 59 | 32 | 55 | 48 | 68 | 47 | 77 | 60 | 87 | 63 | 93 | 70 |
| 9 | 69 | 51 | 67 | 45 | 76 | 43 | 73 | 52 | 89 | 62 | 93 | 69 |
| 10 | 77 | 67 | 71 | 43 | 78 | 51 | 77 | 48 | 87 | 67 | 92 | 68 |
| 11 | 82 | 65 | 71 | 46 | 80 | 49 | 78 | 52 | 87 | 71 | 86 | 67 |
| 12 | 65 | 43 | 64 | 48 | 80 | 62 | 79 | 57 | 84 | 64 | 84 | 70 |
| 13 | 74 | 42 | 61 | 43 | 64 | 44 | 80 | 55 | 83 | 66 | 86 | 68 |
| 14 | 69 | 53 | 63 | 36 | 70 | 39 | 84 | 59 | 84 | 69 | 86 | 71 |
| 15 | 64 | 45 | 63 | 43 | 78 | 47 | 82 | 55 | 83 | 69 | 87 | 69 |
| 16 | 53 | 36 | 68 | 38 | 83 | 53 | 64 | 45 | 77 | 57 | 88 | 68 |
| 17 | 64 | 34 | 73 | 40 | 64 | 60 | 74 | 59 | 75 | 54 | 88 | 69 |
| 18 | 54 | 37 | 76 | 44 | 64 | 55 | 75 | 63 | 79 | 53 | 88 | 68 |
| 19 | 62 | 33 | 82 | 55 | 68 | 53 | 74 | 62 | 81 | 57 | 89 | 67 |
| 20 | 67 | 42 | 83 | 56 | 76 | 50 | 65 | 58 | 79 | 59 | 89 | 69 |
| 21 | 67 | 49 | 75 | 60 | 76 | 52 | 73 | 55 | 85 | 55 | 91 | 68 |
| 22 | 50 | 35 | 68 | 54 | 83 | 60 | 81 | 53 | 91 | 61 | 90 | 71 |
| 23 | 55 | 32 | 69 | 53 | 79 | 56 | 85 | 60 | 93 | 65 | 89 | 70 |
| 24 | 46 | 37 | 68 | 58 | 66 | 60 | 84 | 63 | 92 | 67 | 90 | 70 |
| 25 | 66 | 40 | 79 | 57 | 74 | 52 | 85 | 60 | 87 | 70 | 92 | 70 |
| 26 | 64 | 43 | 62 | 57 | 58 | 39 | 83 | 63 | 85 | 68 | 92 | 71 |
| 27 | 72 | 56 | 58 | 47 | 69 | 41 | 87 | 61 | 85 | 64 | 94 | 73 |
| 28 | 69 | 51 | 65 | 41 | 82 | 57 | 91 | 70 | 89 | 65 | 95 | 74 |
| 29 | 50 | 39 | | | 75 | 64 | 88 | 69 | 88 | 68 | 89 | 73 |
| 30 | 46 | 37 | | | 72 | 50 | 85 | 69 | 86 | 67 | 88 | 73 |
| 31 | 58 | 42 | | | 75 | 46 | | | 83 | 69 | | |
| AVG. | 62 | 43 | 70 | 50 | 72 | 51 | 80 | 58 | 84 | 63 | 89 | 69 |

# APPENDIX 2. AVERAGE YEARLY POTATO PRODUCTION STATISTICS FOR POTATOES PRODUCED AT THE UF/IFAS HREC HASTINGS FARM.

Table 47. Average production statistics for all selections in the Chipping Potato Variety Trial grown at the UF/IFAS Hastings Demonstration Unit Research Farm in each year.

| Year | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Specific Gravity | Total Culls[2] | HH[3] | IHN[3] | APP[4] |
|---|---|---|---|---|---|---|---|---|
| 2001 | 287 | 250 | 84 | 1.076 | *na* | 1 | 1 | 5.6 |
| 2002 | 267 | 242 | 85 | 1.071 | 13 | 0 | 1 | 5.8 |
| 2003 | 427 | 362 | 87 | 1.076 | 3 | 4 | 1 | 5.8 |
| 2004 | 349 | 278 | 85 | 1.083 | 2 | 2 | 1 | 5.9 |
| 2005 | 308 | 254 | 89 | 1.077 | 2 | 0 | 1 | 5.8 |
| 2006 | 431 | 373 | 100 | 1.083 | 5 | 2 | 2 | 5.4 |
| 2007 | 403 | 345 | 102 | 1.080 | 1 | 0 | 0 | 6.6 |
| 2008 | 351 | 268 | 92 | 1.081 | 4 | 1 | 4 | 5.5 |
| 2009 | 384 | 295 | 85 | 1.062 | 14 | 1 | 0 | 5.2 |
| 2010 | 409 | 271 | 90 | 1.067 | 6 | 8 | 2 | na |
| 2011 | 327 | 251 | 90 | 1.075 | 6 | 0 | 3 | 5.9 |
| 2012 | 382 | 336 | 84 | 1.081 | 3 | 1 | 1 | 6.2 |
| 2013 | 336 | 300 | 101 | 1.069 | 4 | 1 | 0 | 5.9 |
| 2014 | 325 | 238 | 96 | 1.067 | 13 | 0 | 2 | 6.5 |

Table 48. Average production statistics for all selections in the Fresh Market Potato Variety Trial grown at the UF/IFAS Hastings Demonstration Unit Research Farm in each year.

| Year | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Specific Gravity | Total Culls[2] | HH[3] | IHN[3] | APP[4] |
|---|---|---|---|---|---|---|---|---|
| 2001 | 289 | 254 | 84 | 1.070 | *na* | 0 | 2 | 4.8 |
| 2002 | 227 | 186 | 82 | 1.069 | 21 | 0 | 0 | 5.5 |
| 2003 | 439 | 363 | 112 | 1.065 | 6 | 1 | 0 | 6.1 |
| 2004 | 353 | 233 | 96 | 1.072 | 5 | 1 | 1 | 5.5 |
| 2005 | 271 | 196 | 78 | 1.063 | 3 | 0 | 0 | 5.6 |
| 2006 | 293 | 236 | 87 | 1.066 | 9 | 0 | 0 | 5.2 |
| 2007 | 332 | 280 | 96 | 1.068 | 2 | 0 | 0 | 5.9 |
| 2008 | 238 | 165 | 111 | 1.073 | 2 | 0 | 0 | 5.7 |
| 2009 | 362 | 247 | 97 | 1.060 | 19 | 0 | 0 | 6.0 |
| 2010 | 294 | 182 | 79 | 1.060 | 12 | 0 | 0 | 5.9 |
| 2011 | 385 | 252 | 89 | 1.061 | 12 | 2 | 2 | 5.6 |
| 2012 | 322 | 230 | 95 | 1.061 | 16 | 1 | 1 | 5.6 |
| 2013 | 126 | 85 | 68 | 1.050 | 12 | 1 | 1 | 5.7 |
| 2014 | 305 | 157 | 108 | 1.060 | 14 | 0 | 1 | 6.0 |

Table 49. Average production statistics for all selections in the Red and Purple-Skinned Potato Variety Trial grown at the UF/IFAS Hastings Demonstration Unit Research Farm in each year.

| Year | Total Yield (cwt/A) | Marketable Yield[1] (cwt/A) | Marketable Yield[1] % of standard | Specific Gravity | Total Culls[2] | HH[3] | IHN[3] | APP[4] |
|---|---|---|---|---|---|---|---|---|
| 2001 | 221 | 195 | 70 | 1.071 | *na* | 0 | 0 | 5.9 |
| 2002 | 269 | 233 | 68 | 1.065 | 11 | 1 | 1 | 5.6 |
| 2003 | 453 | 376 | 90 | 1.064 | 4 | 1 | 1 | 6.0 |
| 2004 | 333 | 227 | 70 | 1.072 | 2 | 1 | 0 | 5.9 |
| 2005 | 276 | 213 | 71 | 1.064 | 3 | 0 | 0 | 5.4 |
| 2006 | 330 | 272 | 68 | 1.065 | 3 | 0 | 0 | 5.7 |
| 2007 | 313 | 223 | 68 | 1.062 | 1 | 0 | 0 | 5.9 |
| 2008 | 190 | 93 | 48 | 1.069 | 2 | 0 | 0 | 6.4 |
| 2009 | 290 | 197 | 58 | 1.061 | 17 | 0 | 1 | 5.5 |
| 2010 | 269 | 146 | 62 | 1.056 | 6 | 2 | 1 | 6.2 |
| 2011 | 275 | 146 | 90 | 1.062 | 19 | 0 | 0 | 5.8 |
| 2012 | 225 | 131 | 104 | 1.058 | 23 | 0 | 1 | 5.9 |
| 2013 | 147 | 89 | 78 | 1.056 | 13 | 0 | 1 | 5.5 |
| 2014 | 220 | 109 | 95 | 1.054 | 6 | 0 | 1 | 5.4 |

[1]Marketable Yield: size classes A1 to A3.

[2]Percent of Total Yield. Total culls include the sum of growth cracks, misshapen, sunburned and rotten/misc.

[3]Percent tubers; HH, hollow heart; IHN, internal heat necrosis.

[4]See rating system outlined in Table 2 (page 11).