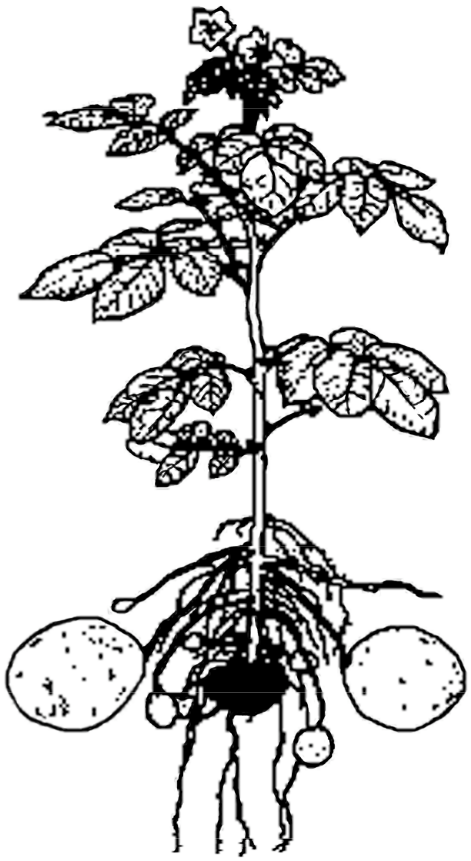
# NC STATE UNIVERSITY

# NORTH CAROLINA
## POTATO VARIETY TRIAL AND BREEDING REPORT

## 2004

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## I. OBJECTIVES:

Our research is conducted in collaboration with the USDA Cooperative States Research Extension and Education Service (CSREES) NE1014 Multi-state Potato Variety Development and Evaluation Project. The overall objective of the NE1014 Project is to develop high yielding, disease and insect resistant, table- and chip-stock potato varieties for potato growers in the eastern US. The objective of the NC State University variety development and breeding program is to evaluate germplasm, and select and develop adapted potato varieties that are suitable for use by North Carolina growers, and the southeastern US potato industry in general.

## II. PROJECT SUMMARY

Our program focuses on two areas: the development of new potato germplasm and varieties through collaborative early-generation breeding and selection projects with the USDA-ARS, Cornell University and the University of Maine; and the evaluation of preliminary and advanced breeding clones for adaptation to NC from a wide range of potato breeding programs in the US and Canada. Our in-house efforts to develop varieties in North Carolina begin with crossing in the greenhouses at the VGJREC/TRS and subsequent planting, selection and advance to single-hill, 6-hill, 20-hill and 60-hill plots depending on relative performance at each of these stages over a period of four years before a clone is entered into replicated yield trials. This year 7,252 single-hills were planted and 89 clones were selected averaging a 1.2% selection rate, which is slightly lower than normal. Out of the 236 clones in our 6-hill plots, 24 were selected for future evaluation. In the 20-hill plot 18 clones were planted and 5 were selected for further evaluation, while none of the 10 clones planted to 60-hill plots were advanced. Our USDA-ARS, UM and CU early generation materials consisted of 481 four-hill plots from the University of Maine and the USDA, 96 12-hill plots from the USDA, and 34 20-hill plots from Cornell University. We selected 20 clones from the UM 4-hill plots, and 7 clones each from the 12-hill and 20-hill plots. In our yield trials, a total of 183 preliminary and advanced clones were evaluated. These evaluations were conducted either on-farm, at the Cunningham Research Station (NCSU) in Kinston, and/or at the Tidewater Research Station (NCDA&CS)/Vernon G. James Research and Extension Center (NCSU) in Plymouth, NC. Advanced clones were typically evaluated at more than one site in NC. The results of the yield trials are summarized later in this report, and in Tables 1-11. Each table has two parts, the first (a) being devoted to yield information, specific gravity measurements, and chip color scores, and the second (b) providing potato plant and tuber quality characteristics. This report can also be viewed and downloaded at our website http://www.ces.ncsu.edu/plymouth/hort/potato/index.html.

## 2004 Promising Lines:

***Chip-stock clones***

*AF2360-2. Developed by the University of Maine, this late maturing clone has been screened in 2 trials during 2002 and 2004. While our level of knowledge of this clone is limited it has chipped well (2 on a 1-5 scale with 1 being best) though it's gravity is low. It has produced medium-large to large tubers both years and has a fair appearance. It has shown very little hollow heart (3% in 2004) and no internal heat necrosis (IHN).*

*B0766-3. Developed by the USDA-ARS, we have screened this mid-maturing clone in 29 trials since 1995. This year it was evaluated in 4 trials. Yields were acceptable though in most cases slightly less than Atlantic. This year it chipped very well (average score of 1.5) and historically it has chipped very good (2) though its gravity is slightly lower than Atlantic. Size tends to be medium to medium large and appearance is fair. This clone shows very low incidence of IHN, over 10 years an average of 1.6% at a rating of 8.6 (on a scale of 1-9, with 9 representing no IHN), this year its most severe rating was 7.5% incidence of IHN averaging a rating of 8.5.*

*Harley Blackwell. Developed by the USDA-ARS and released in 2003, we have evaluated this mid-maturing clone since 1995 in 33 trials. In the past, yields have exceeded Atlantic by 5% or more. This year a defect, descriptively titled star cracking, caused a reduction in marketable yield such that the average was 85% of Atlantic (historically, over 10 yrs, yields have averaged 105% of Atlantic). We have not seen this defect in previous years and think it may be due to a negative environment x herbicide interaction. This year we also evaluated spacing this variety at both 12 inches and our standard 9(see Tables 1a and1b). A spacing of 9 inches in the row appears to be better than 12 inches. Harley Blackwell chipped well (2) and has chipped acceptable in past years (2.7 average). Overall, appearance for this year was slightly better than fair though historically it has received a better than good rating. This variety stands out because it is resistant to IHN and typically has low incidence of other internal defects.*

*Marcy. Developed by Cornell University and released in 2003, Marcy has been evaluated in 7 trials since 1998. This late maturing clone was screened in 4 yield tests this year where it had marketable yields close to that of Atlantic or greater. Chipping scores this year averaged a 2 and historically a 2.7. It is a medium-large potato and has a good overall appearance score. IHN has been a problem with this clone. However, historically IHN incidence and severity is less than that of Atlantic.*

***Table-stock and specialty-type clones***

*Amey. Developed by the USDA-ARS and released in 2001, Amey has been evaluated in 14 trials since 1995. This is a mid-maturing specialty-type, baby russet clone. Typically, the majority of potatoes produced are in the 2 and 3 size class. We believe that this potato may fit well with the public's increasing level of carbohydrate intake concerns as it represents a russet-type potato that is not excessively large, but highly attractive and very flavorful. Yields typically are not high, but this is partly a factor of the size profile. This clone does has expressed a low level of IHN, historically 4% incidence averaging a rating of 7.5.*

*B1816-5. Developed by the USDA-ARS, this specialty-type clone has been evaluated in 10 trials since 2000. It is an attractive early to mid-maturing, purple-skinned, yellow-fleshed potato. It tends to produce a medium to small-medium sized potato with marketable yields near Chieftain (89% historically). This year, it was evaluated in 4 trials and had an average marketable yield of 114% of Chieftain in three trials. This clone does not express IHN and has very few other internal defects, although this year it had 13% vascular ring in one trial. B1816-5 has been placed on the fast track for variety release and will be evaluated by several growers in NC during 2005 dependent on seed availability.*

*B1952-2. Developed by the USDA-ARS, it has been evaluated in 5 trials since 2001. This is an early to mid maturing specialty-type potato with a purple skin and white flesh. It is medium sized and has historical marketable yields 79% of Chieftain. In 2004, it was evaluated in 2 trials and marketable yields were 84% of Chieftain. This clone has expressed low levels of IHN in past years historically averaging 3% at a rating of 8.8.*

*B2135-163. Developed by the USDA-ARS, it has been evaluated in 8 trials since 2002. This is a mid-maturing white-skinned, white-fleshed potato. It has purple eyes that add to its overall attractiveness. This clone is intended to be a table-stock potato and may be able to fill Superior's niche because it chips well (historical score of 2) and it has an equal gravity, historically (1.068). Historically, marketable yields have been 109% Atlantic and 127% Superior. In the Black Gold Farms variety trial it received an unusually low appearance score. This was largely because of growth cracks, which have been the main problem with this clone, but we are unsure if this issue is serious enough to warrant dropping it from variety consideration. Internal defects (historical data) include some IHN (2% at a rating of 8.7), 4% hollow heart and 2% soft rot, which are all low.*

*Michigan Purple. Developed by Michigan State University and released in 2001, Michigan Purple has been reviewed in 6 trials since 2001. This is a mid-maturing, very attractive specialty-type potato with a bright almost metallic purple skin and white flesh. It is a medium to large potato and typically yields equal to Chieftain. We have never assigned this potato high appearance scores. This is largely due to skinning at the time of grading and can probably be overcome if it is vine killed and allowed adequate time for skin setting to occur. Another major problem with this clone is susceptibility to scab*

*and susceptibility to silver scurf. This year no internal defects were noted however in the past IHN (3% at a rating of 8.3), hollow heart (2%), and soft rot (2%) have been noted.*

*Vivaldi. Developed by De ZPC (now HZPC) and released in 1999, Vivaldi has been evaluated in 5 trials since 2001. This is a mid to late maturing buff-skinned, yellow-fleshed potato. This variety produces a highly attractive, medium-sized, oblong potato that is very flavorful. It yields 88% of Atlantic compared with Yukon Gold at 76% of Atlantic. In 2002 we noted 3% IHN at a rating of 8, no other significant internal defects have been noted. As a table-stock potato, Vivaldi is one of the more attractive clones that the program has evaluated over the years and we are recommending that growers take a look at it in a limited fashion.*

## III. RESEARCH STATION AND ON-FARM COOPERATOR LOCATIONS:

Tidewater Research Station (NCDA&CS)/Vernon G. James Research and Extension Center, (NCSU), Plymouth, NC (Washington Co.)
Black Gold Farms, Gumneck, NC (Tyrrell Co.)
James Brothers Farms, Weeksville, NC (Pasquotank Co.)
Cunningham Research Station (NCSU), Kinston, NC (Lenoir Co.)

## COOPERATING COUNTY EXTENSION SPECIALISTS[1] AND EXTENSION ASSOCIATES[2]:

Tom Campbell[1], Elizabeth City, Pasquotank Co.
Bill Jester[2], Kinston, Greene, Lenoir, and Wayne Co's.
Frank Winslow[1] & Carla Pugh[1], Columbia, Tyrrell Co.
Pete Anderson[1] & Bill Ellers[1], Bayboro, Pamlico Co.

## IV. PROCEDURES:

### SITE, SOIL TYPE, PLANTING AND HARVEST DATES FOR YIELD TRIALS

| Site | Soil Type | Planting Date | Harvest Date | Days to Harvest |
|---|---|---|---|---|
| Black Gold | Weeksville black silt loam | Mar 3 | Jun 15 | 104 |
| James Brother's | Weeksville silt loam | Mar 4 | Jun 22 | 110(102 vine kill) |
| McCotter's | Yonges loamy fine sand | Mar 8 | Jun 23 | 107 |
| CRS | Lenoir loam | Mar 10 | Jul 6 | 118 |
| TRS/VGJREC | Portsmouth fine sandy loam | Mar 23, 24 | Jul 1, 7-15 | 100, 106, 107 114, |

**EXPERIMENTAL DESIGN:** All yield trials were planted in a randomized complete block design with 4 replications except the preliminary evaluation trial, which had only one replication per clone. Sixteen clones were evaluated at Black Gold Farms, fifteen clones were evaluated at McCotter's, while 13 and 18 clones, respectively, were evaluated at the CRS and James Brother's on-farm trials. Plots consisted of one row with 28 hills spaced 9 inches apart. Spacing between rows was 38 inches at all sites, with the exception of the James Brother's Trial, which was on a 40 inch row spacing. Weed and pest control practices for on-farm trials were in accordance with those practiced by the cooperators (Appendix 1).

The on-farm trials were dug using a single-row digger and hand harvested. The TRS/VGJREC trials were harvested using a two-row harvester modified to dig one row at a time. All grower trials were graded using a portable Lockwood Grader which sorts to two grades: A+B's ≥ 1

7/8"; and C's < 1 7/8". The TRS/VGJREC trials were graded to five classes: 1's < 1 7/8"; 2's > 1 7/8 to 2 1/2"; 3's > 2 1/2 to 3 1/4"; 4's > 3 1/4 to 4"; 5's > 4". Culls were removed and weighed separately in all trials. Each clone was evaluated for tuber quality and appearance during grading using standardized NE-1014 rating codes. A description of the rating codes is provided in Appendix 2.

After grading and weighing, 40 marketable tubers (10 tubers/replication) were randomly sampled from each entry. The tubers were cut and scored for the presence of hollow heart, heat necrosis and any other internal defects. A second sub-sample of marketable tubers from each replication was taken and bulked by entry for specific gravity readings and chipping tests. Specific gravity was determined using the weight-in-air/weight-in-water method. Chip evaluations were conducted at the TRS/VGJREC and Wise Foods, Berwick, PA.

Chip evaluations were conducted by Wise Foods and at the TRS/VGJREC for all on farm trials, and at the TRS/VGJREC for all research station trials. Chipping at the TRS/VGJREC was done at least once within 48 hrs of harvest. To transport the potatoes to Wise Foods in Berwick, PA for chip samples the potatoes (5 tubers per sample) were placed in a plastic mesh bag and loaded on the back of a truck en-route to Wise. In most cases, chip evaluations were conducted within 72-96 hrs of digging.

## V. RESULTS:

### Environmental Summary (Appendix 3)

Our season started on time with the first week in March beginning significantly warmer than normal. In late March and early April several locations experienced frosts that burned back the tops of newly emerged plants confounding emergence data. Rain was adequate during the season; however, its distribution did not suit the crop in some locations. For example, at the TRS an extended dry spell occurred during the bulking stage of growth greatly reducing yield. In contrast, at the CRS where the specialty crops trial was planted, it was so wet during the last two weeks of growth that we could not harvest the plots and soft rot accounted for much of the loss in this trial. Also, an early flight of European Corn Borer infested many of our trials causing the tops to die prematurely, resulting in the emergence of excessive weeds in some of our plots. As a results of all these factors harvest went well into the third week in July.

## A. Yield Trials

### 1. On-Farm Trials

### Black Gold Variety Trial (Tables 1a and 1b)

Atlantic, our standard, had a marketable yield of 304 cwt/A and two clones had significantly greater marketable yields: Harley Blackwell at 9 inch spacing (360 cwt/A); and Marcy (366 cwt/A). Two clones (NY128 and Snowden at 9 inch spacing) had a chip score rating of 1 at both the TRS and Wise. Two clones, Harley Blackwell at 9 inches and Marcy received an overall appearance score of 8. Atlantic, Harley Blackwell at 12 inches and Willamette also had good appearance scores. Atlantic was the only clone to express internal heat necrosis (IHN) at a 7, all others had less severe incidence. Atlantic had 35% incidence of IHN, Dakota Pearl had 13% and Superior 13%. Only two clones expressed hollow heart at an incidence of 15% or greater: Dakota Pearl (30%) and Atlantic (15%). The primary external defects observed in the trial were growth cracks and misshapes.

### James Brother's Variety Trial (Tables 2a and 2b)

Because of the diversity of materials in this trial three standards for yield were chosen: Atlantic (our round white standard), Chieftain (red standard), and Yukon Gold (yellow flesh standard). One clone, B1816-5, is a purple skin yellow flesh potato and for our purposes will be discussed in relation to Chieftain. In this trial no clone had a marketable yield significantly greater than the standards: Atlantic (279 cwt/A); Chieftain (197 cwt/A); and Yukon Gold (284 cwt/A). While no clone had a statistically greater yield than Atlantic three round white clones warrant mentioning because of their yields: B2135-163 (280 cwt/A); B0766-3 (272 cwt/A); and Marcy (263 cwt/A). Though no red was statistically greater in terms of yield the only one with a greater marketable yield was B1816-5 (239 cwt/A). No yellow flesh potatoes had a greater yield than Yukon Gold. One clone chipped with a score of 2 or better at both the TRS and Wise; B0766-3. In terms of overall appearance two clones received an 8 (Marcy and Superior). Clones with an overall appearance score of 7 were: Atlantic; B1816-5; and NY125. Our three standards all had IHN incidence greater than 10% (Atlantic 23%, Chieftain 13%, and Yukon Gold 13%) and none had an average IHN rating greater than 8. Culls were primarily due to misshapes, and secondary growth.

### McCotter Farms Variety Trial (Tables 3a and 3b)

Overall in this trial yields were lower than what we have seen in past years. This in large part may be due to the lack of rainfall throughout the growing season. Our standard Atlantic had a marketable yield of 221 cwt/A. While no clone had significantly greater yield two clones: B2135-163 (251 cwt/A) and Marcy (272 cwt/A) had higher marketable yields. Two clones B0766-3 and Marcy had chip scores of 2 or better at both the TRS and Wise. Two clones Atlantic (23%) and Yukon Gold (30%) had IHN greater than 10% and no clone in the trial had a rating of over an 8. The primary defects in this trial were sun scald and misshapes.

### Specialty Crops Variety Trial at the CRS (Tables 4a and 4b)

This trial is specifically designed to focus on reds, purples, and other potatoes that we believe may fill various niche markets in our state. For simplicity we have compared all marketable yields in this trial to our standard Chieftain (157 cwt/A). None of the clones in the trial significantly exceeded the standard yield. Two clones however did have greater yields these were B1816-5 (171 cwt/A), and La Rouge (179 cwt/A). The only clone with an overall appearance score of 7 was Yukon Gold. The only clone with percent IHN levels at or greater than 10% was Amey (10%), but the IHN severity rating was not exceptionally serious at 8. The most common external defects were growth cracks, misshapes, skin blemishes attributed to Rhizoctonia, and silver scurf.

## 2. TRS/VGJREC Yield Trials

### Round White Trial One (Tables 5a and 5b)

Of the twenty-two clones in this trial, none had marketable yields greater than Atlantic, which yielded 212 cwt/A. In terms of chipping, six clones (AF2207-4, B0766-3, B1990-3, B1992-106, B2135-163, and B2258-3) had a score of 1. Two clones (Atlantic, and B2135-163) received an overall appearance rating score of 7. Clones with 10% or more incidence of IHN were: AF2291-10 (48%); AF2351-4 (33%); B1990-3 (28%); Atlantic (20%); and Yukon Gold (10%). None of the clones had an IHN severity rating greater than 7.5. Common defects were misshapes, soft rot, sunscald, growth cracks, and skin blemishes attributed to Rhizoctonia.

### Round White Trial Two (Tables 6a and 6b)

Of the fourteen clones in this trial, two had marketable yields greater than Atlantic, which yielded 180 cwt/A. Neither of the clones [NY132 (199 cwt/A) and AF2360-2 (201 cwt/A)] were, however, significantly greater. In terms of chipping, six clones (AF2360-2, Atlantic, NY131, NY132, Snowden, and Superior) had a score of 2. One clone, NY133 received an overall appearance rating score of 7. Clones with 10% or more incidence of IHN were: Atlantic (53%); NY132 (23%); and Snowden (10%). Atlantic had the most severe average IHN severity rating was at 7.3. Common defects were misshapes, soft rot, sunscald, growth cracks, and skin blemishes attributed to Rhizoctonia.

### NE-1014 White Trial. (Tables 7a and 7b)

Of the twenty-two clones in this trial none had marketable yields significantly greater than Atlantic (212 cwt/A). However, six clones had higher yields: AF2115-1 (213 cwt/A); Snowden (216 cwt/A); NY126 (221 cwt/A); AF2215-1 (228 cwt/A); NY127 (233 cwt/A); and B1806-8 (250 cwt/A). Three clones received a chip rating of 1 (exceptionally bright): AC Sunbury; Snowden; and Superior. Six clones: AC Sunbury; AF2115-1; AF2222-2; NY126; NY127 and NY128 were rated an 7 for overall appearance. Clones with 10% or greater incidence of IHN were: A9014-2 (10%); Atlantic (25%); Katahdin (13%); NY128 (10%); Snowden (18%); and Yukon Gold (18%). Culls were commonly misshapes, sunscald, secondary growth, and skin blemishes attributed to Rhizoctonia.

### NE-1014 Red Trial. (Tables 8a and 8b)

The standard, Chieftain, had a marketable yield of 177 cwt/A. Of the twenty-three clones in this trial none of them had higher marketable yields than Chieftain. NDTX731-1R was the only clone to have an overall appearance rating of 8. Four clones: B2066-3; B2079-6; Dark Red Norland; and ND8089-2R, had an overall appearance rating of 7. Clones with 10% or greater IHN were: Chieftain (53%); ND8082-1R (48%); and NY129 (35%). Culls were due mostly to soft rot, misshapes, secondary growth, heat sprouts, and skin blemishes attributed to Rhizoctonia and silver scurf.

### Unreplicated Trial. (Tables 9a and 9b)

Sixty clones were evaluated in this trial along with the standards Atlantic, Snowden and Superior. Each 28-hill plot was unreplicated. Clones with promising attributes such as high yield, high specific gravity, exceptional appearance and/or high disease resistance will be evaluated in following years in replicated trials.

## B. Breeding and Early Generation Selection Efforts

### 1. NCSU/USDA-ARS Early Generation Project. (10a and 10b and 11a and 11b)

This project, conducted in cooperation with Dr. Kathleen Haynes, USDA-ARS and funded in part by the USDA-CSREES, is an on-going experiment focused on: 1) developing improved potato breeding and selection methods for the eastern US; and 2) developing improved varieties more suitable to the range of climates and photoperiods found in the Mid-Atlantic and Southeastern U.S. In 2004, 25 clones remaining from two potato populations composed of multiple parents, and subjected to three years of selection in ME and NC during a four year period, were evaluated in replicated trials in Virginia, North Carolina, and New Jersey. The data for the two NC trials are summarized in Tables 10 and 11. The data from NC, NJ and VA will be summarized and presented elsewhere at the conclusion of the study. Two clones: B2133-18 (191 cwt/A) and

B2131-112 (196 cwt/A), produced significantly higher marketable yields than Atlantic (173 cwt/A), and several have produced equal yields. One clone, B2179-74 had an overall appearance score of 8 and three clones had an overall appearance score of 7: B2111-80, B2131-112, and B2133-46. Clones with a chip score of 1 were: B2111-80, B2133-70, B213-75, B2192-21, and B2193-30.

### 2. Collaborative Selection Projects

This effort is similar to the NCSU/USDA-ARS Early Generation Project in that we screen materials early on from our collaborating institutions: the University of Maine (UM), Cornell University (CU), and the USDA-ARS. The primary difference is we do not see these materials until they enter the second cycle of selection at the parent institution. As such we begin selection at the 4-hill stage then advance to 12-hills and then to 20-hills, at which time our collaborating institution will most likely have seed for larger trials.

This year the 4-hill plot was composed of materials from UM and the USDA-ARS. This year we screened 481 clones from UM and 29 clones from the USDA-ARS. From UM we selected 20 clones that we will evaluate next year as 12-hills none were selected from the USDA

In our 12-hill plot 96 clones were planted from the USDA-ARS and 7 were selected. These will be evaluated next year as 20-hills.

The 20-hill plot had 34 clones from CU and 7 clones were selected for further evaluation. This plot also contained materials developed here at NCSU and they will be discussed below.

### 3. NCSU Potato Variety Development Efforts

Our efforts to develop varieties in North Carolina begin with selection in a single hill plot then advance to a 6-hill plot and then to a 20-hill plot. Following this materials are placed in a sixty-hill plot for a final cycle of selection before entering into yield trials. Our single hill materials come from the USDA-ARS and our own crosses made at the TRS and are generated in the TRS greenhouses. This year 7252 single hills were planted and 89 clones were selected or 1.2%. Out of the 236 clones in our 6-hill plot 24 were selected for future evaluation. In the 20-hill plot 18 clones were planted and 5 were selected for further evaluation. Our sixty-hill plot had 10 clones and none were carried through for evaluation next year.

## V. ACKNOWLEDGMENTS

This work could not be conducted without the assistance of the growers, county extension agents and NCDA&CS TRS staff. We are grateful for their continued support and assistance. Wise Foods, Berwick, PA is also gratefully acknowledged for conducting chip tests. Seed for the trials was provided by: Dr. Walter De Jong Cornell University; Dr. Dave Douches, Michigan State University; Dr. Susie Thompson, North Dakota State University; Dr. Ken Rykbost and Mr. Steve James, Oregon State University; Dr. Zenaida Ganga, University of Maine; and Dr. Kathleen Haynes, USDA/ARS, Beltsville, MD. Also a special thanks goes to Mr. Todd Bradley and the staff at Maine Farmers Exchange, Presque Isle, ME for their efforts to procure small amounts of seed for shipment to NC. And another very special thank you to Childstock Farms, Malone, NY and Skogman Potato Farm, Foster City, MI for taking the time to send small amounts of seed. This project is funded in part by The North Carolina Potato Growers Association, the USDA-CSREES and the USDA-ARS. Their continuing support is much appreciated.

Table 1a. Black Gold Farms Variety Trial. Total and marketable yield, percentage of total yield by size class, specific gravity, and chip scores of potato clones harvested 104 DAP[1] at Black Gold Farms, Gum Neck, Tyrrell Co., NC - 2004

| | Total Yield | Marketable Yield | | Size Distribution by Class[2] (% of total yield) | | | Specific | Chip Color[4] | |
|---|---|---|---|---|---|---|---|---|---|
| Clone | cwt/A | cwt/A | % Atl. | A's + B's | C's | Culls | Gravity[3] | TRS | Wise |
| Atlantic | 339 | 304 | 100 | 90 | 7 | 3 | 1.072 | 2 | 3.5 |
| B0766-3 | 278 | 250 | 82 | 90 | 8 | 2 | 1.063 | 2 | 1.5 |
| B1240-1 | 237 | 212 | 70 | 90 | 6 | 4 | 1.062 | 3 | 4 |
| B2135-163 | 323 | 268 | 89 | 83 | 9 | 8 | 1.063 | 2 | 2.5 |
| Dakota Pearl | 336 | 268 | 88 | 80 | 10 | 11 | 1.063 | 3 | 2 |
| Harley Blackwell(12in) | 303 | 261 | 86 | 86 | 12 | 2 | 1.066 | 2 | 3 |
| Harley Blackwell(9in) | 400 | 360 | 120 | 90 | 9 | 1 | 1.069 | 1 | 2.5 |
| Liberator | 261 | 187 | 63 | 71 | 16 | 13 | 1.065 | 2 | 2 |
| Marcy | 387 | 366 | 121 | 95 | 4 | 1 | 1.062 | 2 | 2 |
| MSH067-3 | 265 | 230 | 76 | 87 | 8 | 5 | 1.068 | 1 | 4 |
| MSJ147-1 | 305 | 265 | 88 | 87 | 13 | 0 | 1.064 | 3 | 4.5 |
| NY128 | 283 | 235 | 78 | 83 | 17 | 0 | 1.067 | 1 | 1 |
| Snowden (12in) | 259 | 225 | 74 | 87 | 11 | 2 | 1.063 | 1 | 2 |
| Snowden(9in) | 244 | 201 | 66 | 82 | 16 | 1 | 1.064 | 1 | 1 |
| Superior | 318 | 283 | 94 | 89 | 4 | 7 | 1.063 | 2 | 1.5 |
| Willamette | 270 | 220 | 73 | 82 | 15 | 3 | 1.056 | 2 | 5 |
| Grand Mean | 301 | 259 | | | | | | | |
| CV (%) | 10 | 12 | | | | | | | |
| LSD (K=100) | 41.4 | 40.8 | | | | | | | |

[1] DAP= Day After Planting; DVK= Days of Vine Kill

[2] Size classes: A's + B's >1 7/8" ; C's ≤ 1 7/8" ; Culls - all defective potatoes.

[3] Determined by weight in air / water method.

[4] Chip Color Ratings conducted by Wise Foods Inc. and the NCSU potato breeding Program at TRS/VGJREC:
1= no defects, expectionally bright; 2= excellent, bright; 3= good, light or golden; 4= dark defects, marginal; 5= not acceptable

Table 1b. Black Gold Farms Variety Trial. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 104 DAP[1] at Black Gold Farms, Gum Neck, Tyrrell Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Clone** | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | | HN | HNR | HH | VR | BC | SR | Comments[4] |
| Atlantic | 8 | 9 | 7 | 5 | 6 | 5 | 7 | 6 | 2 | 6 | 7 | 8 | 7 | | 35 | 7.3 | 15 | 0 | 5 | 3 | GC |
| B0766-3 | 6 | 9 | 8 | 4 | 6 | 6 | 7 | 7 | 2 | 8 | 6 | 8 | 6 | | 3 | 8.8 | 3 | 0 | 0 | 0 | GC, MS |
| B1240-1 | 6 | 8 | 6 | 8 | 6 | 6 | 5 | 5 | 4 | 7 | 7 | 8 | 5 | | 0 | 9 | 0 | 0 | 0 | 0 | GC, MS, DSE |
| B2135-163 | 6 | 9 | 7 | 5 | 6 | 7 | 7 | 7 | 3 | 8 | 6 | 8 | 4 | | 0 | 9 | 0 | 0 | 0 | 0 | ^GC |
| Dakota Pearl | 6 | 9 | 8 | 5 | 8 | 8 | 7 | 7 | 2 | 8 | 5 | 8 | 4 | | 13 | 8 | 30 | 0 | 13 | 0 | ^GC, MS, SS |
| Harley Blackwell(12in) | 5 | 8 | 7 | 5 | 6 | 5 | 2 | 7 | 2 | 7 | 7 | 7 | 7 | | 0 | 9 | 0 | 0 | 0 | 0 | ~RZ, GC, MS |
| Harley Blackwell(9in) | 9 | 9 | 7 | 4 | 6 | 5 | 2 | 7 | 2 | 7 | 6 | 7 | 8 | | 0 | 9 | 0 | 0 | 0 | 0 | RZ, MS |
| Liberator | 6 | 9 | 7 | 6 | 7 | 8 | 4 | 4 | 4 | 7 | 5 | 8 | 4 | | 3 | 8.8 | 3 | 0 | 0 | 0 | GC, ^MC |
| Marcy | 9 | 9 | 8 | 7 | 7 | 5 | 5 | 7 | 3 | 7 | 7 | 8 | 8 | | 0 | 9 | 3 | 0 | 0 | 0 | GC, MS |
| MSH067-3 | 6 | 8 | 8 | 6 | 6 | 5 | 1 | 7 | 3 | 7 | 6 | 6 | 3 | | 5 | 8.8 | 3 | 0 | 0 | 0 | GC, MS, CS |
| MSJ147-1 | 6 | 8 | 9 | 5 | 9 | 8 | 6 | 7 | 2 | 7 | 4 | 8 | 5 | | 3 | 8.8 | 0 | 0 | 0 | 0 | |
| NY128 | 6 | 9 | 8 | 8 | 7 | 6 | 7 | 7 | 2 | 8 | 5 | 8 | 6 | | 0 | 9 | 0 | 0 | 0 | 0 | GC, MS |
| Snowden (12in) | 6 | 9 | 8 | 8 | 6 | 5 | 5 | 7 | 2 | 6 | 5 | 8 | 5 | | 0 | 9 | 0 | 0 | 0 | 0 | MS, DSE |
| Snowden(9in) | 6 | 8 | 7 | 8 | 6 | 5 | 5 | 7 | 2 | 6 | 5 | 8 | 6 | | 3 | 8.8 | 0 | 0 | 0 | 0 | ^DSE |
| Superior | 9 | 8 | 7 | 4 | 6 | 6 | 7 | 6 | 3 | 6 | 7 | 8 | 6 | | 13 | 8.5 | 0 | 3 | 0 | 0 | ^GC, MS |
| Willamette | 9 | 9 | 8 | 6 | 8 | 7 | 7 | 7 | 2 | 7 | 5 | 8 | 7 | | 5 | 8.5 | 0 | 0 | 0 | 0 | GC, MS, ~DAE |

[1] DAP= Day After Planting; DVK= Days of Vine Kill

[2] See NE 1014 Standard Potato Rating System for to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in A and B size classes. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for comments codes

Table 2a. James Brother's Farm Variety Trial. Total and marketable yield, percentage of total yield by size class, specific gravity and chip scores of potato clones harvested 110 DAP[1] (102 DVK[1]) at James Brother's Farm, Weeksville, Pasquotank Co., NC - 2004.

| | | | | | | Size Distribution by Class[2] (% of total yield) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Yield | Marketable Yield | | | | | | | Specific | Chip Color[4] | |
| Clone | cwt/A | cwt/A | % Atl. | %Yukon | %Chieftain | A's + B's | C's | Culls | Gravity[3] | TRS | Wise |
| Atlantic | 304 | 279 | 100 | 101 | 154 | 91 | 7 | 1 | 1.067 | 2 | 3 |
| B0766-3 | 299 | 272 | 102 | 99 | 156 | 91 | 7 | 2 | 1.065 | 1 | 2 |
| B1240-1 | 219 | 201 | 73 | 75 | 108 | 92 | 7 | 1 | 1.051 | 3 | 5 |
| B1806-8 | 269 | 223 | 86 | 84 | 127 | 81 | 16 | 3 | 1.063 | . | . |
| B1816-5 | 303 | 239 | 92 | 91 | 133 | 75 | 23 | 2 | 1.062 | . | . |
| B2135-163 | 321 | 280 | 105 | 99 | 152 | 87 | 10 | 3 | 1.064 | 1 | 2.5 |
| Cherry Red | 236 | 184 | 67 | 68 | 98 | 78 | 16 | 6 | 1.061 | . | . |
| Chieftain | 297 | 197 | 72 | 73 | 100 | 65 | 14 | 20 | 1.05 | . | . |
| Harley Blackwell | 297 | 209 | 78 | 74 | 116 | 70 | 19 | 11 | 1.057 | 1 | 2.5 |
| Marcy | 287 | 263 | 97 | 97 | 142 | 91 | 8 | 0 | 1.063 | 2 | 3 |
| NorDonna | 239 | 121 | 42 | 45 | 63 | 49 | 22 | 29 | 1.052 | . | . |
| NY125 | 330 | 273 | 97 | 100 | 149 | 82 | 14 | 4 | 1.062 | . | . |
| NY126 | 211 | 156 | 59 | 59 | 79 | 71 | 15 | 14 | 1.057 | . | . |
| NY129 | 234 | 161 | 59 | 59 | 96 | 67 | 25 | 7 | 1.051 | . | . |
| Snowden | 253 | 206 | 79 | 75 | 115 | 80 | 17 | 3 | 1.059 | 2 | 2.5 |
| Superior | 265 | 229 | 86 | 86 | 130 | 86 | 13 | 2 | 1.065 | 2 | 3 |
| Vivaldi | 280 | 170 | 57 | 61 | 92 | 56 | 35 | 8 | 1.053 | . | . |
| Yukon Gold | 311 | 284 | 104 | 100 | 158 | 91 | 7 | 2 | 1.067 | . | . |
| Grand Mean | 275 | 219 | | | | | | | | | |
| CV (%) | 20 | 30 | | | | | | | | | |
| LSD (K= 100) | 90.1 | 81.8 | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: A's + B's > 1 7/8"; C's ≤ 1 7/8"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

[4] Chip Color Ratings conducted by Wise Foods Inc. and the NCSU potato breeding program at the TRS/VGJREC:
1 = no defects, exceptionally bright; 2 = excellent, bright; 3 = good, light or golden; 4 = dark defects, marginal; 5 = not acceptable.

Table 2b. James Brother's Farm Variety Trial. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 110 DAP[1] (102 DVK[1]) at James Brother's Farm, Weeksville, Pasquotank Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| Atlantic | 6 | 8 | 7 | 6 | 7 | 5 | 7 | 7 | 2 | 6 | 6 | 8 | 7 | 23 | 8 | 0 | 0 | 0 | 0 | MS, SC, SR |
| B0766-3 | 6 | 9 | 8 | 5 | 8 | 5 | 7 | 6 | 2 | 6 | 5 | 8 | 5 | 0 | 9 | 0 | 13 | 0 | 0 | MS, SG, SS |
| B1240-1 | 5 | 8 | 7 | 6 | 7 | 5 | 5 | 5 | 3 | 7 | 5 | 7 | 6 | 0 | 9 | 0 | 0 | 3 | 0 | MS, SC, SS |
| B1806-8 | 6 | 8 | 9 | 5 | 7 | 7 | 5 | 4 | 4 | 7 | 4 | 6 | 4 | 0 | 9 | 0 | 15 | 0 | 0 | ^SR YF2 |
| B1816-5 | 6 | 8 | 9 | 3 | 1 | 6 | 5 | 6 | 4 | 7 | 5 | 7 | 7 | 0 | 9 | 0 | 13 | 0 | 0 | MS,GC ~Pts YF2 |
| B2135-163 | 6 | 9 | 8 | 5 | 6 | 6 | 7 | 6 | 2 | 7 | 5 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | MS, GC, SG, RZ |
| Cherry Red | 8 | 9 | 9 | 5 | 2 | 5 | 7 | 7 | 2 | 8 | 5 | . | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SG, Pts, GC, RZ, FS, MS |
| Chieftain | 8 | 8 | 8 | 5 | 3 | 7 | 7 | 4 | 3 | 5 | 5 | 7 | 4 | 13 | 8 | 0 | 15 | 0 | 0 | ^ SG, RZ, ^MS, GC |
| Harley Blackwell | 6 | 8 | 8 | 6 | 7 | 5 | 7 | 7 | 2 | 7 | 5 | 6 | 5 | 0 | 9 | 0 | 10 | 0 | 0 | ^SC, MS, SG |
| Marcy | 7 | 8 | 7 | 7 | 7 | 5 | 7 | 7 | 3 | 8 | 7 | 9 | 8 | 3 | 8.8 | 0 | 3 | 0 | 0 | MS |
| NorDonna | 6 | 9 | 8 | 5 | 2 | 8 | 5 | 6 | 3 | 7 | 5 | 7 | 4 | 0 | 9 | 0 | 8 | 0 | 0 | ^SG, MS |
| NY125 | 6 | 8 | 9 | 6 | 7 | 7 | 6 | 7 | 4 | 7 | 6 | 8 | 7 | 0 | 9 | 0 | 3 | 0 | 0 | SG, MS YF1 |
| NY126 | 6 | 7 | 8 | 6 | 7 | 6 | 5 | 5 | 3 | 8 | 5 | 8 | 4 | 0 | 9 | 0 | 3 | 0 | 0 | MS, ^ Pts YF1 |
| NY129 | 6 | 8 | 9 | 7 | 2 | 6 | 7 | 7 | 2 | 8 | 5 | 5 | 5 | 0 | 9 | 0 | 5 | 0 | 0 | IL, MS, GC |
| Snowden | 6 | 9 | 8 | 7 | 6 | 5 | 5 | 7 | 2 | 5 | 5 | 8 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | DAE, DSE, SS, MS, FS |
| Superior | 7 | 8 | 9 | 4 | 7 | 5 | 7 | 7 | 3 | 7 | 5 | 8 | 8 | 0 | 9 | 0 | 3 | 0 | 0 | GC, MS |
| Vivaldi | 6 | 8 | 8 | 7 | 7 | 8 | 5 | 7 | 3 | 8 | 4 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | ^SG, MS, YF1 |
| Yukon Gold | 8 | 9 | 8 | 6 | 7 | 7 | 7 | 5 | 3 | 7 | 6 | 8 | 6 | 13 | 8.3 | 0 | 0 | 0 | 0 | IL, MS, SG YF2 |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in A and B size classes. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 3a. McCotter's Farm Variety Trial. Total and marketable yield, percentage of total yield by size class, specific gravity and chip scores of potato clones harvested 107 DAP[1] at McCotter's Farm, Bayboro, Pamlico Co., NC - 2004

| Clone | Total Yield cwt/A | Marketable Yield cwt/A | % Atl. | Size Distribution by Class[2] (% of total yield) A's + B's | C's | Culls | Specific Gravity[3] | Chip Color[4] TRS | Wise |
|---|---|---|---|---|---|---|---|---|---|
| Atlantic | 276 | 221 | 100 | 80 | 11 | 9 | 1.070 | 2 | 3 |
| B0766-3 | 240 | 182 | 83 | 75 | 18 | 7 | 1.066 | 1 | 2 |
| B1816-5 | 236 | 169 | 79 | 71 | 27 | 1 | 1.070 | . | . |
| B2135-163 | 304 | 251 | 116 | 82 | 13 | 5 | 1.069 | 1 | 3.5 |
| Marcy | 309 | 272 | 123 | 88 | 11 | 1 | 1.070 | 1 | 2 |
| MSI005-20Y | 243 | 166 | 75 | 67 | 31 | 2 | 1.061 | . | . |
| MSJ461-1 | 168 | 78 | 36 | 45 | 52 | 3 | 1.059 | 3 | 5 |
| ND3196-1R | 142 | 63 | 28 | 44 | 32 | 24 | 1.059 | . | . |
| NY125 | 259 | 175 | 79 | 68 | 31 | 1 | 1.066 | . | . |
| NY126 | 253 | 219 | 99 | 87 | 13 | 1 | 1.073 | . | . |
| NY129 | 229 | 147 | 66 | 64 | 34 | 2 | 1.058 | . | . |
| Snowden | 211 | 137 | 61 | 64 | 31 | 5 | 1.071 | 2 | 2.5 |
| Superior | 251 | 190 | 87 | 74 | 21 | 4 | 1.076 | 2 | 4 |
| Vivaldi | 273 | 178 | 79 | 63 | 36 | 1 | 1.064 | . | . |
| Yukon Gold | 258 | 214 | 98 | 83 | 9 | 8 | 1.071 | . | . |
| Grand Mean | 243 | 178 | | | | | | | |
| CV (%) | 14 | 22 | | | | | | | |
| LSD (K= 100) | 47.2 | 53.4 | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: A's + B's > 1 7/8"; C's ≤ 1 7/8"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

[4] Chip Color Ratings conducted by Wise Foods Inc. and the NCSU potato breeding program at the TRS/VGJREC:
1 = no defects, exceptionally bright; 2 = excellent, bright; 3 = good, light or golden; 4 = dark defects, marginal; 5 = not acceptable.

Table 3b. McCotter's Farm Variety Trial. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 107 DAP[1] at McCotter's Farm, Bayboro, Pamlico Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Clone** | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | | HN | HNR | HH | VR | BC | SR | Comments[4] |
| Atlantic | 6 | 8 | 7 | 5 | 7 | 5 | 7 | 8 | 2 | 6 | 6 | 7 | 5 | | 23 | 7.8 | 5 | 0 | 13 | 0 | MS, SC, DAE, DSE, GC |
| B0766-3 | 6 | 8 | 6 | 6 | 6 | 6 | 7 | 8 | 2 | 7 | 3 | 5 | 4 | | 3 | 8.8 | 0 | 0 | 3 | 0 | FS,SC, SS, MS |
| B1816-5 | 6 | 8 | 8 | 4 | 1 | 8 | 7 | 8 | 4 | 8 | 3 | 7 | 6 | | 0 | 9 | 0 | 0 | 0 | 0 | SISC, MS YF2 |
| B2135-163 | 6 | 8 | 8 | 4 | 9 | 7 | 7 | 7 | 2 | 8 | 5 | 7 | 7 | | 0 | 9 | 0 | 0 | 0 | 8 | SS, SISC, SR, GC |
| Marcy | 9 | 8 | 7 | 8 | 7 | 5 | 7 | 6 | 3 | 8 | 7 | 8 | 7 | | 0 | 9 | 0 | 0 | 0 | 0 | GC,^ RZ, SR, MS |
| MSI005-20Y | 5 | 9 | 8 | 5 | 6 | 5 | 5 | 7 | 2 | 7 | 3 | 8 | 5 | | 0 | 9 | 0 | 0 | 0 | 5 | SS, MS, SR YF1.5 |
| MSJ461-1 | 6 | 8 | 7 | 5 | 6 | 8 | 7 | 7 | 2 | 7 | 2 | 8 | 4 | | 0 | 9 | 0 | 0 | 0 | 3 | GC, SS |
| ND3196-1R | 4 | 6 | 8 | 4 | 1 | 8 | 7 | 8 | 2 | 7 | 1 | 3 | 3 | | 0 | 9 | 0 | 0 | 5 | 10 | SCB, SS, RZ |
| NY125 | 6 | 9 | 8 | 7 | 9 | 8 | 5 | 7 | 3 | 8 | 3 | 7 | 6 | | 0 | 9 | 0 | 0 | 0 | 3 | SS, SR YF1 |
| NY126 | 8 | 8 | 8 | 8 | 6 | 6 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | | 0 | 9 | 0 | 0 | 0 | 0 | SS, YF1 |
| NY129 | 9 | 9 | 8 | 7 | 3 | 6 | 7 | 7 | 1 | 8 | 2 | 4 | 4 | | 0 | 9 | 0 | 0 | 0 | 0 | ^ IL, RZ |
| Snowden | 7 | 8 | 7 | 7 | 6 | 5 | 7 | 7 | 2 | 5 | 3 | 8 | 4 | | 0 | 9 | 0 | 0 | 0 | 0 | DSE, MS, FS |
| Superior | 9 | 8 | 7 | 5 | 6 | 7 | 7 | 7 | 3 | 6 | 5 | 6 | 5 | | 0 | 8.8 | 0 | 0 | 0 | 3 | ^SR, FS, MS, SS |
| Vivaldi | 8 | 8 | 8 | 6 | 9 | 9 | 7 | 8 | 5 | 8 | 5 | 8 | 8 | | 0 | 9 | 0 | 0 | 0 | 0 | MS YF1.5 |
| Yukon Gold | 9 | 8 | 8 | 6 | 7 | 8 | 7 | 8 | 3 | 7 | 6 | 6 | 6 | | 30 | 7.5 | 0 | 0 | 5 | 0 | MS, SR, SS |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in A and B size classes. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 4a. Specialty Crops Trial. Total and marketable yield, percentage of total yield by size class, and specific gravity of potato clones harvested 118 DAP[1] at the NCSU/NCDA CRS, Kinston, Lenoir Co., NC - 2004

| CLONE | Total Yield cwt/A | Marketable Yield cwt/A | Marketable Yield % Chieftain | Size Dist. by Class (%)[2] (% of total yield) 1's | 2's | 3's | 4's | 5's | Cull's | 1 7/8 to 4" | 2 1/2 to 4" | Specific Gravity[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Amey | 168 | 122 | 84 | 22 | 55 | 17 | 0 | 0 | 5 | 72 | 17 | . |
| B1763-4 | 135 | 90 | 53 | 28 | 44 | 19 | 0 | 0 | 10 | 63 | 19 | 1.063 |
| B1816-5 | 220 | 171 | 136 | 19 | 55 | 22 | 0 | 0 | 4 | 77 | 22 | 1.059 |
| B1952-2 | 160 | 115 | 86 | 16 | 54 | 19 | 0 | 0 | 11 | 73 | 19 | 1.065 |
| B2079-6 | 150 | 80 | 52 | 46 | 47 | 4 | 0 | 0 | 3 | 51 | 4 | 1.063 |
| Chieftain | 219 | 157 | 100 | 23 | 56 | 13 | 0 | 0 | 8 | 69 | 13 | 1.052 |
| Cherry Red | 171 | 113 | 90 | 28 | 60 | 6 | 0 | 0 | 7 | 66 | 6 | 1.068 |
| Dark Red Norland | 152 | 87 | 62 | 35 | 48 | 6 | 0 | 0 | 11 | 54 | 6 | 1.051 |
| La Rouge | 235 | 179 | 135 | 15 | 50 | 25 | 0 | 0 | 9 | 76 | 25 | 1.053 |
| Michigan Purple | 182 | 144 | 96 | 11 | 42 | 36 | 0 | 0 | 11 | 78 | 36 | . |
| NorDonna | 216 | 108 | 79 | 32 | 48 | 2 | 0 | 0 | 18 | 50 | 2 | 1.049 |
| NY129 | 151 | 98 | 75 | 28 | 47 | 19 | 0 | 0 | 7 | 66 | 19 | 1.050 |
| Yukon Gold | 174 | 135 | 102 | 14 | 46 | 32 | 0 | 0 | 8 | 78 | 32 | 1.060 |
| Grand Mean | 179 | 123 | | | | | | | | | | |
| CV (%) | 28 | 35 | | | | | | | | | | |
| LSD (K=100) | 78.2 | 74.5 | | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: A's + B's > 1 7/8"; C's ≤ 1 7/8"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

Table 4b. Specialty Crops Trial. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 118 DAP[1] at the NCSU/NCDA CRS, Kinston, Lenoir Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Clone** | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| Amey | 7 | 8 | 8 | 5 | 5 | 3 | 5 | 7 | 6 | 7 | 3 | 7 | 6 | 10 | 8 | 3 | 0 | 3 | 8 | ^SR |
| B1763-4 | 6 | 8 | 8 | 3 | 1 | 6 | 7 | 7 | 2 | 7 | 5 | 6 | 5 | 0 | 9 | 0 | 0 | 0 | 10 | SISC, MS, SG, SR |
| B1816-5 | 6 | 8 | 8 | 3 | 1 | 6 | 5 | 7 | 4 | 8 | 5 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 3 | SISC, GC, MS YF2 |
| B1952-2 | 7 | 8 | 8 | 2 | 1 | 7 | 7 | 7 | 2 | 6 | 5 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 5 | GC, SISC, SR, MS |
| B2079-6 | 8 | 6 | 8 | 1 | 2 | 7 | 2 | 7 | 2 | 6 | 3 | 7 | 6 | 3 | 8.8 | 0 | 0 | 0 | 3 | GC, SISC, SR, SG |
| Chieftain | 9 | 7 | 8 | 4 | 3 | 7 | 7 | 7 | 2 | 6 | 5 | 7 | 6 | 8 | 8.3 | 0 | 0 | 3 | 3 | GC, SS, MS, SISC, SR, SG |
| Cherry Red | 6 | 9 | 8 | 3 | 2 | 6 | 7 | 7 | 2 | 6 | 5 | 7 | 5 | 0 | 9 | 0 | 0 | 3 | 3 | SS, GC, MS, SG, SR |
| Dark Red Norland | 5 | 7 | 7 | 1 | 2 | 7 | 7 | 7 | 2 | 6 | 5 | 6 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | IL, SR, RZ, SISC, SS |
| La Rouge | 6 | 8 | 8 | 5 | 3 | 7 | 7 | 7 | 2 | 5 | 5 | 7 | 5 | 3 | 8.8 | 0 | 0 | 0 | 0 | MS, SR, SS, GC, DAE |
| Michigan Purple | 5 | 8 | 8 | 4 | 1 | 8 | 5 | 7 | 3 | 6 | 7 | 5 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | ^SISC, SCB, SR, MS, GC |
| NorDonna | 8 | 8 | 8 | 5 | 2 | 7 | 7 | 7 | 2 | 7 | 4 | 6 | 4 | 0 | 8.5 | 0 | 0 | 0 | 0 | ^SG, RZ, IL, SISC, SR, MS |
| NY129 | 8 | 8 | 8 | 5 | 2 | 6 | 7 | 7 | 2 | 8 | 5 | 7 | 6 | 3 | 8.8 | 0 | 0 | 3 | 0 | SS, SISC, IL, SR |
| Yukon Gold | 9 | 9 | 8 | 3 | 7 | 7 | 7 | 7 | 2 | 7 | 6 | 6 | 7 | 0 | 9 | 0 | 0 | 5 | 0 | SR, GC, MS, SS |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE184 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in A and B size classes. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 5a. Round White Trial One. Total and marketable yield, percentage of total yield by size class, specific gravity and chip scores of potato clones of potato clones harvested 106 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Total Yield | Marketable Yield | | Size Distribution by Class[2] (% of total yield) | | | | | | 1 7/8 | 2 1/2 | Specific | Chip |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CLONE | cwt/A | cwt/A | % Atl. | 1's | 2's | 3's | 4's | 5's | Culls | to 4" | to 4" | Gravity[3] | Color[4] |
| AF 2207-4 | 180 | 142 | 70 | 19 | 58 | 21 | 0 | 0 | 2 | 79 | 21 | 1.073 | 1 |
| AF 2291-10 | 143 | 80 | 41 | 3 | 24 | 26 | 3 | 0 | 44 | 53 | 29 | 1.064 | 2 |
| AF 2321-4 | 138 | 106 | 50 | 10 | 49 | 27 | 0 | 0 | 15 | 75 | 27 | 1.058 | 3 |
| AF 2329-1 | 211 | 114 | 57 | 4 | 23 | 31 | 0 | 0 | 42 | 54 | 31 | 1.042 | 3 |
| AF 2351-4 | 166 | 73 | 36 | 16 | 38 | 5 | 0 | 0 | 41 | 43 | 5 | 1.061 | 2 |
| Atlantic | 244 | 212 | 100 | 10 | 56 | 30 | 0 | 0 | 4 | 86 | 30 | 1.069 | 2 |
| B0766-3 | 181 | 151 | 73 | 8 | 53 | 31 | 0 | 0 | 8 | 84 | 31 | 1.059 | 1 |
| B1990-3 | 197 | 149 | 72 | 14 | 39 | 36 | 1 | 0 | 10 | 76 | 37 | 1.056 | 1 |
| B1990-4 | 216 | 181 | 89 | 6 | 42 | 40 | 2 | 0 | 10 | 84 | 42 | 1.059 | 3 |
| B1992-106 | 182 | 132 | 64 | 19 | 54 | 19 | 0 | 0 | 9 | 73 | 19 | 1.068 | 1 |
| B1992-160 | 230 | 154 | 74 | 2 | 21 | 38 | 6 | 0 | 33 | 65 | 44 | 1.066 | . |
| B1992-166 | 186 | 138 | 66 | 13 | 39 | 34 | 0 | 0 | 14 | 73 | 34 | 1.061 | 2 |
| B2000-81 | 232 | 189 | 92 | 12 | 56 | 26 | 0 | 0 | 6 | 82 | 26 | 1.068 | 4 |
| B2135-163 | 191 | 163 | 80 | 9 | 47 | 37 | 0 | 0 | 7 | 84 | 37 | 1.062 | 1 |
| B2258-3 | 209 | 150 | 73 | 22 | 62 | 10 | 0 | 0 | 6 | 72 | 10 | 1.069 | 1 |
| Dakota Pearl | 195 | 106 | 53 | 31 | 48 | 6 | 0 | 0 | 15 | 54 | 6 | 1.06 | 2 |
| Harley Blackwell | 183 | 111 | 54 | 21 | 46 | 14 | 0 | 0 | 19 | 60 | 14 | 1.061 | 2 |
| Marcy | 241 | 206 | 101 | 8 | 47 | 39 | 0 | 0 | 7 | 85 | 39 | 1.065 | 2 |
| NY130 | 192 | 120 | 59 | 21 | 50 | 12 | 0 | 0 | 17 | 62 | 12 | 1.055 | 3 |
| Snowden | 193 | 131 | 65 | 28 | 60 | 8 | 0 | 0 | 4 | 68 | 8 | 1.065 | 2 |
| Superior | 123 | 84 | 42 | 14 | 51 | 17 | 0 | 0 | 18 | 68 | 17 | 1.069 | 2 |
| Yukon Gold | 169 | 149 | 74 | 8 | 59 | 29 | 0 | 0 | 4 | 88 | 29 | 1.064 | . |
| Grand Mean | 191 | 138 | | | | | | | | | | | |
| CV (%) | 16 | 23 | | | | | | | | | | | |
| LSD (K=100) | 42.7 | 43.5 | | | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: 1's < 1 7/8"; 2's 1 7/8 to 2 1/2"; 3's 2 1/2 to 3 1/4"; 4's 3 1/4 to 4"; 5's ≥ 4"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

[4] Chip Color Ratings conducted by the NCSU potato breeding program at the TRS/VGJREC: 1 = no defects, exceptionally bright; 2 = excellent, bright; 3 = good, light or golden; 4 = dark defects, marginal; 5 = not acceptable.

Table 5b. Round White Trial One. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 106 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | % Internal Defects[3] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| AF 2207-4 | 7 | 8 | 8 | 6 | 6 | 6 | 6 | 7 | 3 | 8 | 5 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 3 | SS, MS, STST,RZ, SG |
| AF 2291-10 | 8 | 8 | 7 | 8 | 8 | 7 | 6 | 5 | 3 | 8 | 6 | 8 | 4 | 48 | 7.5 | 3 | 0 | 5 | 5 | MS, SG, SS, GC, RZ |
| AF 2321-4 | 7 | 8 | 8 | 4 | 6 | 7 | 5 | 7 | 3 | 8 | 6 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 3 | SG, SR, MS, ^RZ, GC |
| AF 2329-1 | 8 | 8 | 8 | 4 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SS, GC, RZ |
| AF 2351-4 | 9 | 9 | 8 | 5 | 7 | 8 | 7 | 7 | 1 | 8 | 4 | 5 | 4 | 33 | 7.5 | 0 | 0 | 0 | 0 | GC, ^RZ, SS, SR |
| Atlantic | 6 | 7 | 8 | 5 | 6 | 5 | 7 | 6 | 2 | 7 | 7 | 8 | 7 | 20 | 8 | 0 | 0 | 0 | 0 | SR, SS, GC, MS, RZ |
| B0766-3 | 7 | 8 | 8 | 4 | 6 | 7 | 7 | 6 | 2 | 8 | 6 | 7 | 6 | 8 | 8.5 | 0 | 0 | 0 | 0 | SG, RZ, MS, SR |
| B1990-3 | 7 | 8 | 8 | 7 | 6 | 6 | 7 | 5 | 2 | 7 | 7 | 8 | 5 | 28 | 8 | 0 | 0 | 0 | 0 | SG, RZ, MS, GC,SR, SS |
| B1990-4 | 7 | 6 | 8 | 6 | 6 | 6 | 6 | 7 | 2 | 8 | 7 | 8 | 6 | 8 | 8.5 | 0 | 0 | 0 | 0 | ^RZ, GC, SS, MS |
| B1992-106 | 6 | 7 | 6 | 6 | 5 | 5 | 7 | 5 | 2 | 8 | 6 | 8 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SG, RZ, MS, SR |
| B1992-160 | 8 | 7 | 8 | 6 | 6 | 5 | 7 | 3 | 4 | 8 | 8 | 8 | 5 | 0 | 9 | 0 | 0 | 3 | 0 | GC, MS, SG, SR, SS, SR |
| B1992-166 | 9 | 7 | 7 | 8 | 6 | 6 | 9 | 5 | 1 | 8 | 6 | 8 | 6 | 8 | 8.3 | 0 | 0 | 0 | 3 | SG, RZ, STST, MS |
| B2000-81 | 7 | 7 | 8 | 6 | 6 | 7 | 5 | 6 | 4 | 8 | 5 | 8 | 5 | 3 | 8.5 | 0 | 0 | 0 | 0 | RZ, SS, IL, ^MS, SG, SR |
| B2135-163 | 6 | 7 | 8 | 5 | 8 | 8 | 7 | 5 | 2 | 8 | 6 | 8 | 7 | 0 | 9 | 0 | 0 | 0 | 3 | GC, MS, RZ, SS |
| B2258-3 | 6 | 6 | 8 | 4 | 6 | 6 | 5 | 7 | 3 | 8 | 4 | 7 | 5 | 0 | 9 | 0 | 3 | 0 | 0 | GC, RZ, MS SR |
| Dakota Pearl | 7 | 8 | 8 | 4 | 8 | 8 | 7 | 7 | 2 | 7 | 3 | 7 | 5 | 8 | 8.5 | 0 | 0 | 0 | 0 | SG, MS, RZ, SS, SR |
| Harley Blackwell | 7 | 7 | 8 | 5 | 6 | 6 | 7 | 7 | 2 | 7 | 5 | 6 | 5 | 0 | 9 | 0 | 3 | 10 | 0 | SG, RZ, SC, SS, MS, SR |
| Marcy | 9 | 8 | 8 | 7 | 5 | 5 | 6 | 5 | 3 | 8 | 7 | 8 | 6 | 8 | 8.5 | 0 | 0 | 0 | 0 | SS, RZ, SR |
| NY130 | 7 | 8 | 7 | 3 | 7 | 8 | 9 | 7 | 2 | 8 | 5 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | GC, RZ, SC, SR, SS, SG |
| Snowden | 8 | 8 | 8 | 7 | 6 | 5 | 5 | 5 | 2 | 5 | 5 | 8 | 4 | 8 | 8.5 | 0 | 0 | 0 | 0 | MS, SR, DSE |
| Superior | 8 | 7 | 8 | 4 | 6 | 7 | 6 | 7 | 3 | 8 | 5 | 8 | 5 | 0 | 9 | 0 | 0 | 3 | 0 | CS, RZ, MS, GC |
| Yukon Gold | 9 | 8 | 8 | 4 | 7 | 8 | 7 | 7 | 2 | 8 | 5 | 8 | 6 | 10 | 8.8 | 0 | 0 | 3 | 0 | MS, RZ, STST, SR, SS, GC |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 6a. Round White Trial Two. Total and marketable yield, percentage of total yield by size class, specific gravity and chip scores of potato clones harvested 114 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| CLONE | Total Yield cwt/A | Marketable Yield cwt/A | % Atl. | Size Distribution by Class[2] (% of total yield) 1's | 2's | 3's | 4's | 5's | Culls | 1 7/8 to 4" | 2 1/2 to 4" | Specific Gravity[3] | Chip Color[4] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AF 2321-3 | 217 | 168 | 94 | 7 | 41 | 35 | 0 | 0 | 16 | 77 | 35 | 1.051 | 5 |
| AF 2360-2 | 225 | 201 | 113 | 2 | 20 | 58 | 12 | 0 | 9 | 89 | 69 | 1.061 | 2 |
| Atlantic | 221 | 180 | 100 | 15 | 55 | 27 | 0 | 0 | 4 | 82 | 27 | 1.061 | 2 |
| B2253-4 | 261 | 175 | 99 | 29 | 59 | 7 | 0 | 0 | 4 | 66 | 7 | 1.05 | 4 |
| B2257-11 | 171 | 123 | 68 | 14 | 47 | 24 | 0 | 0 | 16 | 71 | 24 | 1.06 | 3 |
| B2257-8 | 159 | 48 | 27 | 66 | 30 | 0 | 0 | 0 | 4 | 30 | 0 | 1.066 | 3 |
| Kennebec | 208 | 137 | 76 | 4 | 25 | 42 | 0 | 0 | 30 | 66 | 42 | 1.051 | 4 |
| NY131 | 212 | 142 | 80 | 26 | 61 | 6 | 0 | 0 | 8 | 67 | 6 | 1.056 | 2 |
| NY132 | 241 | 199 | 111 | 15 | 62 | 20 | 0 | 0 | 2 | 83 | 20 | 1.066 | 2 |
| NY133 | 195 | 173 | 97 | 9 | 52 | 37 | 0 | 0 | 3 | 89 | 37 | 1.058 | 3 |
| NY134 | 233 | 159 | 88 | 25 | 62 | 5 | 0 | 0 | 7 | 68 | 5 | 1.056 | 3 |
| Snowden | 201 | 152 | 85 | 22 | 66 | 10 | 0 | 0 | 2 | 76 | 10 | 1.059 | 2 |
| Superior | 126 | 103 | 58 | 9 | 56 | 26 | 1 | 0 | 8 | 83 | 27 | 1.06 | 2 |
| Yukon Gold | 165 | 138 | 77 | 10 | 55 | 28 | 0 | 0 | 7 | 83 | 28 | 1.056 | . |
| Grand Mean | 202 | 150 | | | | | | | | | | | |
| CV (%) | 16 | 20 | | | | | | | | | | | |
| LSD (K=100) | 46.3 | 41.2 | | | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: 1's < 1 7/8"; 2's 1 7/8 to 2 1/2"; 3's 2 1/2 to 3 1/4"; 4's 3 1/4 to 4"; 5's ≥ 4"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

[4] Chip Color Ratings conducted by the NCSU potato breeding program at the TRS/VGJREC: 1 = no defects, exceptionally bright; 2 = excellent, bright; 3 = good, light or golden; 4 = dark defects, marginal; 5 = not acceptable.

Table 6b. Round White Trial Two. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 114 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| AF 2321-3 | 6 | 8 | 8 | 5 | 6 | 6 | 6 | 6 | 3 | 5 | 7 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 5 | MS, GC, DSE, DAE, IL, SG, RZ |
| AF 2360-2 | 9 | 8 | 8 | 8 | 9 | 7 | 6 | 7 | 3 | 6 | 9 | 7 | 4 | 0 | 9 | 3 | 0 | 0 | 0 | MS, GC, ~DAE, SS, SR |
| Atlantic | 6 | 7 | 8 | 5 | 7 | 5 | 7 | 7 | 2 | 7 | 7 | 7 | 6 | 53 | 7.3 | 0 | 0 | 5 | 0 | MS, SS, FS, SR, BS, RZ |
| B2253-4 | 8 | 8 | 8 | 5 | 7 | 5 | 7 | 7 | 2 | 7 | 3 | 8 | 5 | 0 | 9 | 0 | 0 | 3 | 0 | MS, SG |
| B2257-11 | 6 | 8 | 8 | 7 | 9 | 7 | 5 | 5 | 4 | 7 | 6 | 6 | 4 | 5 | 8.8 | 0 | 0 | 8 | 0 | SG, MS, RZ |
| B2257-8 | 6 | 7 | 8 | 6 | 6 | 6 | 7 | 7 | 2 | 8 | 2 | 7 | 4 | 5 | 8.8 | 0 | 0 | 3 | 3 | RZ, SR, IL, SG |
| Kennebec | 8 | 8 | 8 | 8 | 6 | 7 | 5 | 5 | 5 | 6 | 8 | 7 | 3 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SS, GC, SR |
| NY131 | 6 | 7 | 8 | 4 | 6 | 7 | 6 | 7 | 2 | 6 | 3 | 7 | 4 | 0 | 9 | 3 | 0 | 0 | 3 | SS, SISC, SG, SR, DAE, DSE |
| NY132 | 8 | 8 | 8 | 7 | 6 | 6 | 7 | 6 | 2 | 7 | 5 | 7 | 6 | 23 | 8 | 0 | 0 | 3 | 10 | SR, RZ, MS |
| NY133 | 7 | 7 | 7 | 4 | 6 | 7 | 7 | 7 | 2 | 7 | 6 | 8 | 7 | 0 | 9 | 0 | 0 | 0 | 0 | SS, SR, DSE, DAE, GC, RZ |
| NY134 | 7 | 8 | 8 | 5 | 6 | 6 | 5 | 7 | 4 | 6 | 5 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SS, MS, RZ, SR, GC |
| Snowden | 7 | 8 | 8 | 8 | 5 | 5 | 7 | 7 | 2 | 5 | 5 | 7 | 4 | 10 | 8.5 | 0 | 0 | 0 | 3 | MS, FS, SR, DSE, DAE, RZ |
| Superior | 8 | 7 | 8 | 4 | 6 | 6 | 7 | 7 | 3 | 7 | 6 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SR, GC |
| Yukon Gold | 9 | 8 | 8 | 5 | 7 | 7 | 7 | 7 | 2 | 7 | 6 | 7 | 5 | 5 | 8.5 | 0 | 0 | 0 | 0 | GC, SR, MS, SS, RZ |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 7a. NE- 1014 Trial. Total and marketable yield, percentage of total yield by size class, specific gravity, and chip scores of potato clones harvested 106 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| CLONE | Total Yield cwt/A | Marketable Yield cwt/A | % Atl. | Size Distribution by Class[2] (% of total yield) 1's | 2's | 3's | 4's | 5's | Culls | 1 7/8 to 4" | 2 1/2 to 4" | Specific Gravity[3] | Chip Color[4] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A9014-2 | 160 | 122 | 57 | 8 | 63 | 12 | 0 | 0 | 16 | 76 | 12 | 1.064 | . |
| AC Sunbury | 183 | 154 | 72 | 12 | 53 | 31 | 0 | 0 | 4 | 84 | 31 | 1.061 | 2 |
| AF2115-1 | 246 | 213 | 101 | 12 | 67 | 20 | 0 | 0 | 2 | 87 | 20 | 1.071 | 1 |
| AF2207-4 | 174 | 132 | 63 | 20 | 58 | 18 | 0 | 0 | 4 | 76 | 18 | 1.069 | 2 |
| AF2215-1 | 260 | 228 | 108 | 7 | 75 | 12 | 0 | 0 | 5 | 88 | 12 | 1.056 | 3 |
| AF2222-2 | 194 | 138 | 66 | 26 | 66 | 5 | 0 | 0 | 3 | 71 | 5 | 1.055 | 3 |
| Atlantic | 245 | 212 | 100 | 12 | 66 | 21 | 0 | 0 | 2 | 87 | 21 | 1.077 | 2 |
| ATX84706-2Ru | 216 | 186 | 88 | 2 | 24 | 56 | 4 | 0 | 14 | 84 | 60 | 1.056 | . |
| B1240-1 | 176 | 154 | 73 | 9 | 57 | 30 | 0 | 0 | 3 | 87 | 30 | 1.061 | 3 |
| B1806-8 | 311 | 250 | 119 | 17 | 69 | 11 | 0 | 0 | 3 | 80 | 12 | 1.059 | . |
| B1826-1 | 247 | 202 | 96 | 9 | 51 | 30 | 0 | 0 | 10 | 81 | 30 | 1.052 | . |
| Katahdin | 195 | 173 | 81 | 5 | 48 | 41 | 0 | 0 | 6 | 89 | 41 | 1.048 | . |
| Kennebec | 179 | 123 | 58 | 4 | 29 | 37 | 1 | 0 | 30 | 66 | 38 | 1.054 | . |
| NY120 | 198 | 120 | 56 | 22 | 54 | 6 | 0 | 0 | 18 | 60 | 6 | 1.056 | 2 |
| NY125 | 223 | 147 | 69 | 22 | 60 | 6 | 0 | 0 | 12 | 65 | 6 | 1.052 | . |
| NY126 | 244 | 221 | 105 | 8 | 49 | 40 | 0 | 0 | 3 | 90 | 41 | 1.054 | . |
| NY127 | 289 | 233 | 111 | 16 | 65 | 15 | 1 | 0 | 3 | 80 | 15 | 1.054 | 2 |
| NY128 | 221 | 183 | 86 | 16 | 61 | 19 | 2 | 0 | 2 | 82 | 21 | 1.064 | 2 |
| Shepody | 135 | 32 | 15 | 10 | 21 | 2 | 0 | 0 | 67 | 23 | 2 | 1.061 | . |
| Snowden | 256 | 216 | 102 | 14 | 64 | 20 | 0 | 0 | 1 | 84 | 20 | 1.069 | 1 |
| Superior | 168 | 151 | 71 | 8 | 75 | 14 | 0 | 0 | 2 | 90 | 14 | 1.059 | 1 |
| Yukon Gold | 186 | 160 | 76 | 9 | 67 | 19 | 0 | 0 | 5 | 86 | 19 | 1.058 | . |
| Grand Mean | 214 | 170 | | | | | | | | | | | |
| CV (%) | 14 | 19 | | | | | | | | | | | |
| LSD (K=100) | 39.3 | 42 | | | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: 1's < 1 7/8"; 2's > 1 7/8 to 2 1/2"; 3's > 2 1/2 to 3 1/4"; 4's > 3 1/4 to 4"; 5's > 4" Culls = all defective potatoes.

[3] Determined by weight in air/water method.

[4] Chip Color Ratings conducted by the NCSU potato breeding program at the TRS/VGJREC: 1 = no defects, exceptionally bright; 2 = excellent, bright; 3 = good, light or golden; 4 = dark defects, marginal; 5 = not acceptable.

Table 7b. NE-1014 Trial. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 106 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Clone** | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | | HN | HNR | HH | VR | BC | SR | Comments[4] |
| A9014-2 | 8 | 8 | 9 | 6 | 6 | 3 | 5 | 6 | 7 | 8 | 5 | 8 | 3 | | 10 | 8.8 | 0 | 0 | 0 | 0 | RZ, BS, PTS |
| AC Sunbury | 6 | 8 | 8 | 3 | 8 | 8 | 7 | 7 | 2 | 8 | 5 | 6 | 7 | | 0 | 9 | 0 | 0 | 0 | 0 | MS, GC, SS |
| AF2115-1 | 8 | 8 | 8 | 4 | 6 | 6 | 7 | 7 | 3 | 7 | 5 | 7 | 7 | | 0 | 9 | 0 | 0 | 0 | 0 | ^RZ, ^SG, MS, STST |
| AF2207-4 | 6 | 8 | 8 | 7 | 6 | 5 | 7 | 6 | 3 | 7 | 6 | 6 | 4 | | 0 | 9 | 0 | 0 | 0 | 3 | ^MS |
| AF2215-1 | 6 | 8 | 8 | 7 | 8 | 7 | 5 | 5 | 4 | 7 | 7 | 7 | 4 | | 0 | 9 | 0 | 0 | 0 | 0 | MS, SS |
| AF2222-2 | 7 | 8 | 8 | 5 | 6 | 6 | 7 | 7 | 1 | 8 | 3 | 7 | 7 | | 0 | 9 | 0 | 0 | 0 | 3 | DSE, MS, SS, SG, GC |
| Atlantic | 6 | 7 | 8 | 4 | 7 | 5 | 7 | 7 | 2 | 6 | 6 | 7 | 6 | | 25 | 7.8 | 0 | 0 | 0 | 3 | ^MS, GC |
| ATX84706-2Ru | 7 | 8 | 8 | 9 | 6 | 4 | 5 | 7 | 7 | 7 | 9 | 8 | 4 | | 0 | 9 | 0 | 0 | 0 | 3 | MS, RZ, SS, GC |
| B1240-1 | 6 | 7 | 7 | 8 | 7 | 5 | 7 | 5 | 2 | 7 | 7 | 7 | 6 | | 0 | 9 | 0 | 0 | 0 | 0 | MS, SG, SS, CS, YF1 |
| B1806-8 | 6 | 8 | 8 | 7 | 7 | 6 | 5 | 5 | 4 | 7 | 5 | 7 | 5 | | 0 | 9 | 0 | 0 | 0 | 0 | MS, CS, SG, SR, RZ |
| B1826-1 | 6 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 3 | 8 | 7 | 7 | 6 | | 0 | 9 | 0 | 0 | 0 | 3 | ^MS, SG, PTS, GC |
| Katahdin | 6 | 8 | 8 | 7 | 8 | 7 | 5 | 7 | 3 | 6 | 7 | 7 | 5 | | 13 | 7.8 | 0 | 3 | 0 | 0 | MS, SG, RZ GC, AC |
| Kennebec | 8 | 8 | 8 | 9 | 8 | 7 | 7 | 4 | 5 | 6 | 9 | 7 | 6 | | 0 | 9 | 0 | 0 | 0 | 0 | GC, SG, ^MS |
| NY120 | 6 | 7 | 7 | 4 | 6 | 5 | 7 | 8 | 2 | 8 | 6 | 5 | 6 | | 0 | 9 | 0 | 0 | 0 | 0 | ^SC, RZ |
| NY125 | 6 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 2 | 8 | 5 | 7 | 6 | | 0 | 9 | 0 | 0 | 0 | 3 | RZ, MS, SS, ^SG YF1 |
| NY126 | 8 | 8 | 8 | 5 | 7 | 5 | 7 | 6 | 2 | 8 | 7 | 8 | 7 | | 0 | 9 | 0 | 0 | 0 | 0 | MS, SG, SR YF1 |
| NY127 | 6 | 7 | 9 | 4 | 9 | 7 | 7 | 8 | 2 | 6 | 6 | 8 | 7 | | 0 | 9 | 0 | 0 | 0 | 0 | SS, DSE, DAE |
| NY128 | 8 | 6 | 8 | 8 | 7 | 5 | 7 | 7 | 2 | 7 | 7 | 8 | 7 | | 10 | 8.8 | 0 | 0 | 0 | 3 | MS, SS, SR |
| Shepody | 7 | 8 | 8 | 7 | 8 | 7 | 5 | 6 | 7 | 7 | 7 | 8 | 1 | | 8 | 7.8 | 0 | 0 | 0 | 3 | ^MS, CS, RZ, SG |
| Snowden | 7 | 8 | 8 | 8 | 6 | 5 | 7 | 7 | 2 | 6 | 6 | 8 | 5 | | 18 | 8.3 | 0 | 0 | 0 | 3 | MS, DSE |
| Superior | 6 | 8 | 8 | 4 | 6 | 6 | 7 | 7 | 2 | 6 | 6 | 7 | 5 | | 8 | 8.5 | 0 | 0 | 0 | 3 | RZ, SCB, MS |
| Yukon Gold | 9 | 8 | 8 | 4 | 7 | 7 | 7 | 7 | 2 | 7 | 6 | 7 | 6 | | 18 | 8 | 3 | 0 | 3 | 0 | SR, MS YF2 |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 8a. NERD Trial. Total and marketable yield, percentage of total yield by size class, and specific gravity, of potato clones harvested 100 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| CLONE | Total Yield cwt/A | Marketable Yield cwt/A | % Chieftain | Size Dist. by Class (%)[2] (% of total yield) 1's | 2's | 3's | 4's | 5's | Cull's | 1 7/8 to 4" | 2 1/2 to 4" | Specific Gravity[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AC Red Island | 136 | 46 | 27 | 63 | 34 | 0 | 0 | 0 | 3 | 34 | 0 | 1.052 |
| ATND98459-1Ry | 173 | 107 | 61 | 17 | 50 | 12 | 0 | 0 | 21 | 62 | 12 | 1.049 |
| B1816-5 | 182 | 124 | 73 | 31 | 64 | 2 | 0 | 0 | 2 | 67 | 2 | 1.057 |
| B1952-2 | 175 | 136 | 81 | 19 | 64 | 14 | 0 | 0 | 3 | 78 | 14 | 1.061 |
| B2066-3 | 132 | 65 | 38 | 50 | 49 | 1 | 0 | 0 | 1 | 50 | 1 | 1.060 |
| B2079-6 | 134 | 66 | 39 | 50 | 46 | 3 | 0 | 0 | 2 | 49 | 3 | 1.058 |
| Cherry Red | 99 | 79 | 46 | 19 | 63 | 16 | 0 | 0 | 1 | 79 | 16 | 1.058 |
| Chieftain | 243 | 177 | 100 | 16 | 53 | 20 | 0 | 0 | 11 | 73 | 20 | 1.052 |
| Dark Red Norland | 149 | 112 | 66 | 23 | 63 | 12 | 0 | 0 | 2 | 75 | 12 | 1.051 |
| La Rouge | 204 | 170 | 99 | 14 | 53 | 30 | 0 | 0 | 3 | 83 | 30 | 1.050 |
| Mazama | 152 | 103 | 59 | 30 | 49 | 18 | 0 | 0 | 3 | 67 | 18 | 1.048 |
| Modoc | 177 | 107 | 62 | 34 | 50 | 10 | 0 | 0 | 6 | 60 | 10 | 1.046 |
| ND4659-5R | 149 | 87 | 51 | 31 | 49 | 9 | 0 | 0 | 11 | 58 | 9 | 1.051 |
| ND5002-3R | 114 | 76 | 48 | 32 | 51 | 12 | 0 | 0 | 6 | 62 | 12 | 1.054 |
| ND6961b-1R | 118 | 76 | 44 | 32 | 55 | 10 | 0 | 0 | 4 | 64 | 10 | 1.058 |
| ND8082-1R | 99 | 58 | 33 | 12 | 32 | 27 | 1 | 0 | 29 | 59 | 28 | 1.027 |
| ND8083b-1py | 152 | 59 | 36 | 62 | 36 | 2 | 0 | 0 | 1 | 37 | 2 | 1.061 |
| ND8089-2R | 93 | 56 | 33 | 29 | 48 | 11 | 0 | 0 | 12 | 59 | 11 | 1.044 |
| NDTX731-1R | 212 | 177 | 100 | 15 | 51 | 33 | 0 | 0 | 2 | 84 | 33 | 1.042 |
| NorDonna | 172 | 56 | 33 | 26 | 30 | 3 | 0 | 0 | 41 | 33 | 3 | 1.047 |
| NY129 | 184 | 143 | 84 | 11 | 49 | 28 | 0 | 0 | 11 | 77 | 28 | 1.045 |
| W2-8 | 84 | 27 | 17 | 64 | 32 | 0 | 0 | 0 | 4 | 32 | 0 | 1.050 |
| Wimena | 155 | 121 | 69 | 18 | 51 | 28 | 0 | 0 | 3 | 78 | 28 | 1.040 |
| Grand Mean | 152 | 97 | | | | | | | | | | |
| CV (%) | 20 | 27 | | | | | | | | | | |
| LSD (K=100) | 39.9 | 33.8 | | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: 1's < 1 7/8"; 2's 1 7/8 to 2 1/2"; 3's 2 1/2 to 3 1/4"; 4's 3 1/4 to 4"; 5's ≥ 4"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

Table 8b. NERD Trial. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 100 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Clone** | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | | HN | HNR | HH | VR | BC | SR | Comments[4] |
| AC Red Island | 7 | 8 | 8 | 7 | 3 | 7 | 7 | 7 | 2 | 8 | 2 | 8 | 5 | | 5 | 8.3 | 0 | 0 | 0 | 0 | SISC, MS, SG, SR, SS |
| ATND98459-1Ry | 6 | 7 | 8 | 7 | 3 | 7 | 7 | 5 | 2 | 7 | 3 | 8 | 4 | | 0 | 9 | 0 | 0 | 0 | 3 | ^SG, MS , SS, STST, RZ |
| B1816-5 | 6 | 8 | 9 | 4 | 1 | 6 | 7 | 5 | 4 | 7 | 4 | 8 | 5 | | 0 | 9 | 0 | 0 | 0 | 3 | MS, ^SISC, SG |
| B1952-2 | 6 | 7 | 8 | 3 | 1 | 7 | 5 | 4 | 4 | 6 | 5 | 8 | 6 | | 0 | 9 | 0 | 3 | 0 | 3 | SISC, RZ, MS, SG, SR |
| B2066-3 | 5 | 7 | 8 | 5 | 2 | 8 | 6 | 5 | 2 | 8 | 2 | 8 | 7 | | 0 | 9 | 0 | 0 | 0 | 5 | SS, SISC, SR, MS, GC |
| B2079-6 | 6 | 8 | 8 | 3 | 2 | 7 | 8 | 7 | 1 | 6 | 2 | 7 | 7 | | 0 | 9 | 0 | 0 | 0 | 0 | SR, RZ, SISC, STST |
| Cherry Red | 7 | 8 | 8 | 3 | 3 | 6 | 5 | 6 | 4 | 8 | 5 | 7 | 5 | | 0 | 9 | 0 | 0 | 0 | 5 | SR, SISC, RZ |
| Chieftain | 7 | 8 | 8 | 5 | 3 | 7 | 5 | 4 | 2 | 5 | 6 | 8 | 4 | | 53 | 6.8 | 0 | 0 | 0 | 0 | SISC, SS, ^SG |
| Dark Red Norland | 4 | 8 | 8 | 2 | 3 | 7 | 6 | 7 | 3 | 7 | 5 | 8 | 7 | | 0 | 9 | 0 | 0 | 0 | 3 | SISC, SR, GC, SG, MS |
| La Rouge | 6 | 8 | 8 | 5 | 3 | 8 | 5 | 3 | 2 | 5 | 7 | 8 | 4 | | 0 | 9 | 0 | 0 | 0 | 5 | DAE, MS, DSE, SG |
| Mazama | 6 | 8 | 8 | 5 | 3 | 7 | 7 | 3 | 4 | 7 | 5 | 8 | 6 | | 5 | 6.5 | 0 | 0 | 0 | 8 | RZ, MS SR, SG, IL, DAE, SS |
| Modoc | 6 | 8 | 8 | 5 | 3 | 7 | 7 | 5 | 2 | 8 | 5 | 8 | 6 | | 3 | 8.8 | 0 | 0 | 0 | 3 | SG, HS, SS |
| ND4659-5R | 6 | 8 | 8 | 4 | 2 | 8 | 7 | 5 | 2 | 7 | 4 | 8 | 6 | | 3 | 8.8 | 0 | 0 | 0 | 0 | SG, HS, SISC, SS, GC |
| ND5002-3R | 6 | 7 | 9 | 7 | 1 | 6 | 6 | 4 | 4 | 7 | 6 | 8 | 5 | | 0 | 9 | 0 | 0 | 0 | 5 | MS, SG, SISC |
| ND6961b-1R | 6 | 7 | 8 | 5 | 3/6 | 6 | 3 | 5 | 4 | 8 | 5 | 8 | 3 | | 0 | 9 | 0 | 0 | 0 | 3 | RZ, MS, PTS |
| ND8082-1R | 8 | 6 | 8 | 8 | 2 | 8 | 7 | 2 | 3 | 8 | 6 | 8 | 3 | | 48 | 7 | 0 | 0 | 0 | 8 | SG, MS STST, GC, RZ, AC |
| ND8083b-1py | 6 | 8 | 8 | 3 | 3/6 | 7 | 7 | 7 | 2 | 8 | 3 | 8 | 6 | | 0 | 9 | 0 | 0 | 0 | 8 | MS, SR YF1 |
| ND8089-2R | 4 | 8 | 8 | 3 | 2 | 7 | 7 | 6 | 2 | 8 | 5 | 8 | 7 | | 3 | 8.8 | 0 | 0 | 0 | 0 | SR, GC, RZ SISC, STST, MS |
| NDTX731-1R | 6 | 8 | 8 | 4 | 2 | 6 | 8 | 6 | 1 | 6 | 7 | 8 | 8 | | 0 | 9 | 0 | 0 | 0 | 0 | STST, SG, SR, GC |
| NorDonna | 6 | 8 | 8 | 4 | 3 | 7 | 7 | 7 | 1 | 8 | 5 | 8 | 3 | | 0 | 9 | 0 | 0 | 0 | 0 | ^SG, IL, MS, RZ, SR, HS |
| NY129 | 8 | 8 | 8 | 7 | 3 | 6 | 9 | 5 | 1 | 7 | 6 | 6 | 5 | | 35 | 7.5 | 0 | 0 | 0 | 0 | SG, RZ, IL, GC, STST |
| W2-8 | 5 | 8 | 9 | 3 | 2 | 8 | 6 | 7 | 1 | 9 | 2 | 8 | 6 | | 0 | 9 | 0 | 0 | 0 | 0 | SR, MS |
| Wimena | 6 | 8 | 8 | 7 | 2 | 8 | 7 | 4 | 3 | 7 | 7 | 8 | 6 | | 0 | 9 | 0 | 0 | 0 | 0 | MS, SISC, RZ |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 9a. Unreplicated Trial. Total and marketable yield, percentage of total yield by size class, specific gravity, and chip scores of potato clones harvested 107 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Total Yield | Marketable Yield | | Size Dist. by Class (%)[2] (% of total yield) | | | | | | 1 7/8 | 2 1/2 | Specific |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | cwt/A | cwt/A | % Atlantic | 1's | 2's | 3's | 4's | 5's | Cull's | to 4" | to 4" | Gravity[3] |
| AF 2138-1 | 164 | 26 | 11 | 73 | 16 | 0 | 0 | 0 | 11 | 16 | 0 | 1.072 |
| AF 2171-4 | 202 | 176 | 82 | 12 | 62 | 25 | 0 | 0 | 1 | 87 | 25 | 1.059 |
| AF 2171-5 | 143 | 126 | 59 | 3 | 14 | 74 | 0 | 0 | 9 | 88 | 74 | 1.046 |
| AF 2172-56 | 175 | 168 | 79 | 3 | 33 | 64 | 0 | 0 | 1 | 96 | 64 | 1.062 |
| AF 2172-8 | 170 | 142 | 67 | 9 | 78 | 6 | 0 | 0 | 8 | 84 | 6 | 1.059 |
| AF 2211-2 | 273 | 247 | 108 | 8 | 59 | 31 | 0 | 0 | 2 | 91 | 31 | 1.064 |
| AF 2290-8 | 201 | 134 | 58 | 19 | 50 | 17 | 0 | 0 | 14 | 66 | 17 | 1.047 |
| AF 2351-6 | 255 | 221 | 169 | 8 | 52 | 35 | 0 | 0 | 5 | 87 | 35 | 1.065 |
| AF 2351-7 | 190 | 53 | 40 | 6 | 18 | 9 | 0 | 0 | 66 | 28 | 9 | 1.057 |
| AF 2363-11 | 175 | 163 | 125 | 5 | 77 | 17 | 0 | 0 | 2 | 93 | 17 | 1.070 |
| AF 2376-5 | 220 | 169 | 130 | 12 | 59 | 18 | 0 | 0 | 11 | 77 | 18 | 1.065 |
| AF 2393-5 | 157 | 67 | 51 | 54 | 41 | 2 | 0 | 0 | 3 | 43 | 2 | 1.057 |
| AF 2393-9 | 151 | 83 | 64 | 37 | 55 | 0 | 0 | 0 | 8 | 55 | 0 | 1.051 |
| AF 2551-7 | 107 | 75 | 58 | 20 | 63 | 7 | 0 | 0 | 10 | 70 | 7 | 1.050 |
| AF 2552-23 | 98 | 38 | 29 | 61 | 39 | 0 | 0 | 0 | 0 | 39 | 0 | 1.055 |
| AF 2555-1 | 272 | 164 | 126 | 27 | 59 | 1 | 0 | 0 | 12 | 60 | 1 | 1.058 |
| AF 2559-6 | 160 | 111 | 85 | 21 | 51 | 18 | 0 | 0 | 10 | 69 | 18 | 1.043 |
| AF 2568-7 | 95 | 65 | 50 | 23 | 57 | 11 | 0 | 0 | 9 | 68 | 11 | 1.046 |
| AF 2570-3 | 147 | 92 | 71 | 34 | 60 | 2 | 0 | 0 | 4 | 62 | 2 | 1.048 |
| AF 2598-1 | 65 | 36 | 28 | 28 | 56 | 0 | 0 | 0 | 17 | 56 | 0 | 1.047 |
| AF 2600-1 | 145 | 105 | 81 | 26 | 66 | 6 | 0 | 0 | 2 | 72 | 6 | 1.055 |
| AF 2600-2 | 139 | 61 | 46 | 51 | 44 | 0 | 0 | 0 | 6 | 44 | 0 | 1.049 |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: 1's < 1 7/8"; 2's 1 7/8 to 2 1/2"; 3's 2 1/2 to 3 1/4"; 4's 3 1/4 to 4"; 5's ≥ 4"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

Table 9b. Unreplicated Trial. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 107 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| AF 2138-1 | 6 | 8 | 8 | 4 | 1 | 7 | 7 | 7 | 3 | 7 | 2 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | SG |
| AF 2171-4 | 6 | 3 | 8 | 4 | 6 | 6 | 7 | 6 | 2 | 7 | 6 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | MS |
| AF 2171-5 | 8 | 8 | 8 | 5 | 6 | 6 | 7 | 4 | 2 | 7 | 8 | 7 | 4 | 20 | 8 | 0 | 0 | 0 | 0 | RZ |
| AF 2172-56 | 9 | 8 | 7 | 8 | 6 | 7 | 5 | 6 | 3 | 7 | 7 | 8 | 4 | 10 | 8 | 0 | 0 | 0 | 0 | MS, RZ |
| AF 2172-8 | 6 | 7 | 5 | 4 | 7 | 6 | 7 | 7 | 2 | 8 | 5 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | RZ, IL |
| AF 2211-2 | 8 | 8 | 8 | 4 | 6 | 5 | 7 | 5 | 2 | 6 | 6 | 7 | 5 | 10 | 6 | 0 | 0 | 0 | 0 | DSE, GC, SG, MS |
| AF 2290-8 | 6 | 8 | 8 | 8 | 8 | 8 | 5 | 7 | 3 | 7 | 5 | 7 | 4 | 40 | 6 | 0 | 0 | 10 | 0 | MS, SG |
| AF 2351-6 | 8 | 9 | 8 | 7 | 9 | 8 | 7 | 4 | 2 | 6 | 7 | 7 | 4 | 50 | 8 | 0 | 0 | 0 | 0 | MS |
| AF 2351-7 | 8 | 8 | 8 | 9 | 7 | 5 | 7 | 6 | 2 | 8 | 7 | 7 | 1 | 80 | 4 | 0 | 0 | 0 | 0 | ^^FS |
| AF 2363-11 | 8 | 7 | 8 | 5 | 8 | 7 | 7 | 6 | 2 | 7 | 6 | 6 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | ^RZ, GC |
| AF 2376-5 | 8 | 9 | 8 | 6 | 8 | 6 | 7 | 7 | 2 | 7 | 5 | 7 | 4 | 20 | 7 | 0 | 10 | 0 | 0 | ^SG |
| AF 2393-5 | 5 | 8 | 8 | 1 | 2 | 9 | 7 | 7 | 2 | 7 | 3 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | |
| AF 2393-9 | 5 | 8 | 8 | 3 | 3 | 8 | 5 | 7 | 4 | 8 | 3 | 5 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | ^BLSC, MS YF1 |
| AF 2551-7 | 4 | 8 | 8 | 3 | 9 | 7 | 5 | 7 | 5 | 8 | 6 | 7 | 6 | 0 | 9 | 0 | 0 | 10 | 0 | FS, SR, SS |
| AF 2552-23 | 6 | 8 | 8 | 4 | 8 | 9 | 5 | 7 | 4 | 8 | 3 | 8 | 7 | 80 | 4 | 0 | 0 | 0 | 0 | |
| AF 2555-1 | 8 | 7 | 8 | 3 | 9 | 7 | 6 | 7 | 4 | 8 | 5 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SG, HS, SR, MS, IL |
| AF 2559-6 | 8 | 7 | 8 | 4 | 8 | 7 | 5 | 7 | 8 | 8 | 5 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | BS, MS, SR |
| AF 2568-7 | 5 | 8 | 7 | 3 | 6 | 6 | 7 | 5 | 2 | 7 | 5 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | RZ |
| AF 2570-3 | 5 | 6 | 8 | 3 | 6 | 6 | 5 | 7 | 3 | 7 | 5 | 8 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | MS |
| AF 2598-1 | 5 | 7 | 8 | 3 | 8 | 7 | 7 | 7 | 2 | 8 | 3 | 4 | 3 | 0 | 9 | 0 | 0 | 0 | 60 | ^^SR |
| AF 2600-1 | 6 | 8 | 7 | 3 | 6 | 6 | 5 | 5 | 5 | 7 | 3 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | SS |
| AF 2600-2 | 5 | 7 | 8 | 3 | 8 | 7 | 5 | 7 | 5 | 8 | 3 | 8 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SS, SR |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 9a. Continued.

| Clone | Total Yield cwt/A | Marketable Yield cwt/A | % Atlantic | Size Dist. by Class (%)[2] (% of total yield) 1's | 2's | 3's | 4's | 5's | Cull's | 1 7/8 to 4" | 2 1/2 to 4" | Specific Gravity[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AF 2607-2 | 173 | 115 | 54 | 28 | 64 | 3 | 0 | 0 | 6 | 66 | 3 | 1.051 |
| AF 2631-1 | 249 | 179 | 84 | 2 | 22 | 50 | 0 | 0 | 26 | 72 | 50 | 1.066 |
| AF 2631-2 | 178 | 97 | 46 | 31 | 47 | 7 | 0 | 0 | 15 | 54 | 7 | 1.056 |
| AF 2634-5 | 289 | 115 | 54 | 8 | 27 | 13 | 0 | 0 | 52 | 40 | 13 | 1.062 |
| AF 2909-3 | 159 | 139 | 65 | 12 | 73 | 14 | 0 | 0 | 0 | 88 | 14 | 1.055 |
| AF 2909-4 | 156 | 117 | 55 | 19 | 55 | 20 | 0 | 0 | 6 | 75 | 20 | 1.048 |
| AF 2909-5 | 177 | 164 | 72 | 6 | 49 | 44 | 0 | 0 | 1 | 93 | 44 | 1.048 |
| AF 2919-5 | 208 | 158 | 69 | 4 | 43 | 32 | 0 | 0 | 20 | 76 | 32 | 1.061 |
| ARSW00-4114-1 | 248 | 189 | 88 | 12 | 52 | 24 | 0 | 0 | 12 | 76 | 24 | 1.048 |
| ARSW00-4226-1 | 257 | 125 | 59 | 39 | 49 | 0 | 0 | 0 | 13 | 49 | 0 | 1.057 |
| Atlantic | 219 | 183 | 100 | 12 | 47 | 35 | 1 | 0 | 4 | 83 | 36 | 1.065 |
| B1985-1 | 214 | 101 | 47 | 36 | 46 | 1 | 0 | 0 | 17 | 47 | 1 | 1.070 |
| B2246-26 | 311 | 255 | 120 | 13 | 52 | 31 | 0 | 0 | 5 | 82 | 31 | 1.063 |
| B2274-2 | 244 | 106 | 66 | 54 | 43 | 0 | 0 | 0 | 2 | 43 | 0 | 1.064 |
| B2279-1 | 232 | 132 | 82 | 33 | 46 | 11 | 0 | 0 | 10 | 57 | 11 | 1.060 |
| B2280-1 | 204 | 186 | 116 | 7 | 49 | 43 | 0 | 0 | 2 | 91 | 43 | 1.062 |
| B2280-4 | 172 | 121 | 75 | 23 | 65 | 5 | 0 | 0 | 7 | 70 | 5 | 1.060 |
| B2280-5 | 162 | 106 | 66 | 33 | 63 | 2 | 0 | 0 | 2 | 65 | 2 | 1.054 |
| B2281-2 | 249 | 200 | 125 | 19 | 70 | 10 | 0 | 0 | 0 | 81 | 10 | 1.054 |
| B2291-7 | 272 | 92 | 57 | 19 | 33 | 1 | 0 | 0 | 48 | 34 | 1 | 1.067 |
| B2293-2 | 329 | 248 | 154 | 21 | 51 | 24 | 0 | 0 | 4 | 75 | 24 | 1.048 |
| B2293-4 | 291 | 244 | 152 | 13 | 58 | 26 | 0 | 0 | 3 | 84 | 26 | 1.045 |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: 1's < 1 7/8"; 2's 1 7/8 to 2 1/2"; 3's 2 1/2 to 3 1/4"; 4's 3 1/4 to 4"; 5's ≥ 4"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

Table 9b. Continued.

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| AF 2607-2 | 6 | 8 | 8 | 3 | 9 | 7 | 5 | 7 | 3 | 7 | 5 | 6 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SR |
| AF 2631-1 | 8 | 8 | 9 | 8 | 6 | 5 | 5 | 4 | 3 | 8 | 7 | 7 | 3 | 10 | 8 | 0 | 0 | 0 | 0 | ^MS, ^GC, ^RZ |
| AF 2631-2 | 6 | 8 | 8 | 8 | 6 | 7 | 5 | 7 | 3 | 6 | 5 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | ^SG, ^MS, RZ, GC |
| AF 2634-5 | 6 | 8 | 8 | 6 | 8 | 7 | 7 | 6 | 2 | 7 | 6 | 7 | 3 | 0 | 9 | 0 | 0 | 0 | 0 | ^^SG, MS |
| AF 2909-3 | 5 | 8 | 7 | 4 | 8 | 7 | 7 | 7 | 2 | 7 | 5 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | |
| AF 2909-4 | 5 | 7 | 6 | 4 | 6 | 6 | 3 | 6 | 3 | 6 | 5 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | RZ, GC, SR |
| AF 2909-5 | 6 | 8 | 8 | 5 | 6 | 5 | 7 | 5 | 2 | 6 | 6 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | CS, RZ |
| AF 2919-5 | 6 | 8 | 8 | 7 | 7 | 5 | 7 | 5 | 2 | 6 | 7 | 5 | 4 | 60 | 6 | 0 | 0 | 0 | 20 | SC, ^RZ |
| ARSW00-4114-1 | 6 | 8 | 8 | 9 | 6 | 6 | 5 | 7 | 3 | 8 | 6 | 8 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SG, SS |
| ARSW00-4226-1 | 6 | 8 | 8 | 4 | 9 | 8 | 7 | 6 | 2 | 8 | 5 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | ^SG, IL, GC, SS |
| Atlantic | 7 | 7 | 8 | 5 | 7 | 5 | 7 | 6 | 2 | 7 | 7 | 8 | 6 | 53 | 7.3 | 0 | 0 | 0 | 3 | DSE, SS, MS, SR, RZ, GC |
| B1985-1 | 6 | 8 | 8 | 5 | 9 | 8 | 5 | 7 | 2 | 7 | 3 | 8 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | ^SG |
| B2246-26 | 6 | 8 | 8 | 9 | 6 | 5 | 6 | 5 | 2 | 6 | 6 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | SG, MS, SS |
| B2274-2 | 6 | 8 | 8 | 4 | 8 | 7 | 5 | 7 | 2 | 7 | 2 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | MS |
| B2279-1 | 8 | 8 | 8 | 7 | 9 | 6 | 5 | 7 | 3 | 4 | 6 | 7 | 5 | 80 | 8 | 0 | 10 | 0 | 0 | MS, RZ, GC |
| B2280-1 | 6 | 8 | 8 | 5 | 7 | 6 | 7 | 5 | 2 | 7 | 7 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | GC |
| B2280-4 | 5 | 8 | 6 | 4 | 9 | 8 | 5 | 6 | 2 | 7 | 5 | 8 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | ^GC, RZ |
| B2280-5 | 5 | 8 | 7 | 3 | 7 | 8 | 7 | 7 | 2 | 7 | 5 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | RZ |
| B2281-2 | 6 | 8 | 8 | 4 | 7 | 7 | 5 | 6 | 4 | 8 | 6 | 8 | 8 | 0 | 9 | 0 | 0 | 0 | 0 | |
| B2291-7 | 6 | 8 | 8 | 5 | 6 | 6 | 7 | 7 | 3 | 7 | 5 | 7 | 3 | 0 | 9 | 10 | 0 | 0 | 0 | ^^SG |
| B2293-2 | 6 | 9 | 8 | 9 | 7 | 6 | 5 | 5 | 3 | 8 | 7 | 6 | 4 | 80 | 5 | 0 | 0 | 0 | 0 | ^RZ, ^IL |
| B2293-4 | 6 | 8 | 8 | 5 | 6 | 6 | 5 | 7 | 5 | 8 | 7 | 7 | 6 | 60 | 6 | 0 | 0 | 0 | 0 | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 9a. Continued.

| Clone | Total Yield cwt/A | Marketable Yield cwt/A | % Atlantic | Size Dist. by Class (%)[2] (% of total yield) 1's | 2's | 3's | 4's | 5's | Cull's | 1 7/8 to 4" | 2 1/2 to 4" | Specific Gravity[3] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B2304-2 | 236 | 152 | 95 | 21 | 50 | 14 | 0 | 0 | 15 | 64 | 14 | 1.065 |
| B2316-5 | 297 | 153 | 95 | 31 | 49 | 2 | 0 | 0 | 17 | 51 | 2 | 1.069 |
| B2319-1 | 121 | 17 | 11 | 79 | 14 | 0 | 0 | 0 | 7 | 14 | 0 | 1.070 |
| B2319-3 | 76 | 12 | 7 | 80 | 15 | 0 | 0 | 0 | 5 | 15 | 0 | 1.075 |
| B2324-1 | 182 | 93 | 43 | 43 | 51 | 0 | 0 | 0 | 6 | 51 | 0 | 1.076 |
| B2332-2 | 229 | 197 | 123 | 11 | 46 | 40 | 0 | 0 | 3 | 86 | 40 | 1.046 |
| B2333-5 | 191 | 138 | 86 | 25 | 67 | 5 | 0 | 0 | 3 | 72 | 5 | 1.066 |
| Snowden | 229 | 185 | 104 | 18 | 67 | 13 | 0 | 0 | 1 | 81 | 14 | 1.060 |
| Superior | 173 | 144 | 79 | 13 | 63 | 19 | 0 | 0 | 5 | 82 | 19 | 1.064 |
| W52-26 | 222 | 136 | 60 | 37 | 56 | 6 | 0 | 0 | 2 | 61 | 6 | 1.052 |
| Y1-3 | 144 | 39 | 17 | 68 | 27 | 0 | 0 | 0 | 4 | 27 | 0 | 1.062 |
| Y18-16 | 291 | 247 | 108 | 12 | 65 | 19 | 0 | 0 | 3 | 85 | 19 | 1.055 |
| Y18-41 | 266 | 220 | 96 | 15 | 57 | 26 | 0 | 0 | 2 | 83 | 26 | 1.055 |
| Y28-9 | 238 | 151 | 66 | 34 | 59 | 4 | 0 | 0 | 2 | 63 | 4 | 1.061 |
| Y36-153 | 263 | 166 | 73 | 35 | 57 | 6 | 0 | 0 | 2 | 63 | 6 | 1.060 |
| Y36-4 | 318 | 274 | 120 | 13 | 57 | 29 | 0 | 0 | 1 | 86 | 29 | 1.054 |
| Y41-67 | 206 | 171 | 75 | 15 | 73 | 10 | 0 | 0 | 2 | 83 | 10 | 1.061 |
| Y82-4 | 110 | 36 | 16 | 64 | 33 | 0 | 0 | 0 | 3 | 33 | 0 | 1.056 |
| Y83-1 | 165 | 74 | 32 | 54 | 45 | 0 | 0 | 0 | 1 | 45 | 0 | 1.055 |
| Grand Mean | 201 | 135 | | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] Size classes: 1's < 1 7/8"; 2's 1 7/8 to 2 1/2"; 3's 2 1/2 to 3 1/4"; 4's 3 1/4 to 4"; 5's ≥ 4"; Culls = all defective potatoes.

[3] Determined by weight in air/water method.

Table 9b. Continued.

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clone | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| B2304-2 | 6 | 8 | 8 | 4 | 6 | 6 | 6 | 7 | 2 | 6 | 5 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 10 | MS, SG, SR |
| B2316-5 | 8 | 8 | 8 | 5 | 5 | 4 | 5 | 6 | 2 | 7 | 3 | 6 | 1 | 10 | 8 | 0 | 0 | 0 | 0 | ^^SG |
| B2319-1 | 6 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 2 | 6 | 2 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SR, ^SG YF2 |
| B2319-3 | 6 | 6 | 7 | 2 | 8 | 8 | 7 | 7 | 2 | 8 | 1 | 8 | 7 | 0 | 9 | 0 | 0 | 0 | 0 | RZ, SS YF2 |
| B2324-1 | 6 | 7 | 8 | 5 | 7 | 6 | 7 | 7 | 2 | 6 | 3 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | GC, MS, SG YF1 |
| B2332-2 | 5 | 6 | 8 | 6 | 3 | 7 | 7 | 4 | 2 | 7 | 5 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SG, RZ |
| B2333-5 | 6 | 8 | 8 | 5 | 7 | 5 | 5 | 6 | 4 | 7 | 5 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | SS, SR YF2 |
| Snowden | 8 | 8 | 8 | 7 | 6 | 5 | 7 | 6 | 2 | 5 | 6 | 8 | 5 | 3 | 8.8 | 0 | 0 | 0 | 8 | DAE, DSE, MS, SS, GC |
| Superior | 8 | 7 | 8 | 4 | 6 | 5 | 6 | 7 | 3 | 7 | 6 | 8 | 6 | 3 | 8.8 | 0 | 0 | 0 | 3 | RZ, SG, MS, CS |
| W52-26 | 6 | 8 | 8 | 4 | 7 | 6 | 7 | 7 | 2 | 8 | 5 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SS |
| Y1-3 | 6 | 8 | 8 | 2 | 2 | 7 | 7 | 7 | 2 | 7 | 2 | 7 | 7 | 0 | 9 | 0 | 0 | 0 | 0 | SS GOOD B CLONE |
| Y18-16 | 6 | 7 | 8 | 5 | 6 | 7 | 5 | 7 | 3 | 8 | 7 | 6 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | RZ, IL |
| Y18-41 | 8 | 8 | 8 | 5 | 6 | 6 | 7 | 6 | 3 | 7 | 6 | 6 | 6 | 10 | 8 | 0 | 0 | 0 | 30 | IL, SS |
| Y28-9 | 8 | 8 | 8 | 4 | 9 | 6 | 5 | 6 | 3 | 7 | 5 | 8 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | RZ, SR |
| Y36-153 | 6 | 8 | 8 | 5 | 9 | 7 | 5 | 7 | 4 | 8 | 5 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | SS, MS |
| Y36-4 | 8 | 8 | 8 | 5 | 8 | 7 | 5 | 7 | 4 | 6 | 7 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 10 | RZ, MS |
| Y41-67 | 8 | 8 | 7 | 4 | 6 | 7 | 5 | 7 | 3 | 7 | 6 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | SS, SG, RZ |
| Y82-4 | 5 | 8 | 8 | 3 | 2 | 7 | 7 | 7 | 2 | 8 | 2 | 7 | 6 | 0 | 9 | 0 | 0 | 10 | 10 | SISC, SS FS |
| Y83-1 | 5 | 8 | 8 | 2 | 2 | 9 | 7 | 7 | 2 | 6 | 4 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 10a. Early Generation Yield Trial One. Total and marketable yield, percentage of total yield by size class, specific gravity, and chip scores of potato clones harvested 114 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| Clone | Selection Location & Year[2] 1999 | 2000 | 2001 | Total Yield cwt/A | Marketable Yield cwt/A | % Atl. | Size Distribution by Class[3] (% of total yield) 1's | 2's | 3's | 4's | 5's | Culls | 1 7/8 to 4" | 2 1/2 to 4" | Specific Gravity[4] | Chip Color[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | N/A | N/A | N/A | 216 | 173 | 100 | 17 | 66 | 12 | 0 | 0 | 4 | 78 | 12 | 1.06 | 3 |
| B2111-80 | NC | N/M | NC | 186 | 135 | 81 | 26 | 64 | 8 | 0 | 0 | 3 | 72 | 8 | 1.064 | 1 |
| B2117-218 | ME | ME | ME | 132 | 117 | 71 | 9 | 41 | 47 | 0 | 0 | 3 | 88 | 47 | 1.112 | 3 |
| B2122-55 | ME | NC | NC | 163 | 128 | 76 | 8 | 39 | 39 | 0 | 0 | 14 | 78 | 39 | 1.146 | 4 |
| B2122-72 | ME | NC | NC | 236 | 164 | 98 | 14 | 52 | 18 | 0 | 0 | 16 | 69 | 18 | 1.147 | 3 |
| B2128-13 | ME | ME | ME | 250 | 141 | 90 | 22 | 45 | 11 | 0 | 0 | 22 | 56 | 11 | 1.064 | 3 |
| B2128-133 | ME | ME | ME | 204 | 106 | 66 | 20 | 43 | 9 | 0 | 0 | 28 | 51 | 9 | 1.054 | 3 |
| B2128-85 | ME | NC | NC | 205 | 156 | 94 | 21 | 59 | 16 | 0 | 0 | 3 | 76 | 16 | 1.057 | 2 |
| B2130-136 | NC | N/M | ME | 199 | 163 | 99 | 14 | 69 | 13 | 0 | 0 | 4 | 82 | 13 | 1.055 | 3 |
| B2131-112 | ME | ME | NC | 245 | 196 | 118 | 18 | 65 | 14 | 0 | 0 | 3 | 79 | 14 | 1.052 | 3 |
| B2133-18 | ME | ME | ME | 211 | 177 | 105 | 13 | 65 | 19 | 0 | 0 | 3 | 84 | 19 | 1.062 | 2 |
| B2133-46 | NC | ME | NC | 218 | 191 | 113 | 11 | 54 | 33 | 0 | 0 | 2 | 87 | 33 | 1.056 | 2 |
| B2133-70 | ME | N/M | ME | 178 | 164 | 100 | 4 | 31 | 62 | 0 | 0 | 4 | 92 | 62 | 1.058 | 1 |
| B2133-75 | N/M | NC | N/M | 122 | 74 | 45 | 9 | 36 | 24 | 0 | 0 | 30 | 61 | 24 | 1.059 | 1 |
| B2133-81 | ME | N/M | NC | 192 | 158 | 98 | 16 | 74 | 9 | 0 | 0 | 2 | 82 | 9 | 1.06 | 2 |
| Snowden | N/A | N/A | N/A | 263 | 226 | 142 | 13 | 62 | 24 | 0 | 0 | 1 | 86 | 24 | 1.066 | 2 |
| Superior | N/A | N/A | N/A | 164 | 136 | 84 | 13 | 60 | 22 | 0 | 0 | 5 | 82 | 22 | 1.057 | 2 |
| Grand Mean | | | | 199 | 153 | | | | | | | | | | | |
| CV(%) | | | | 15 | 21 | | | | | | | | | | | |
| LSD (K= 100) | | | | 41 | 54.8 | | | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] NC = North Carolina; ME = Maine; N/M = Selected at both locations

[3] Size classes: 1's < 1 7/8"; 2's > 1 7/8 to 2 1/2"; 3's > 2 1/2 to 3 1/4"; 4's > 3 1/4 to 4"; 5's > 4" Culls = all defective potatoes.

[4] Determined by weight in air/water method.

[5] Chip Color Ratings conducted by the NCSU potato breeding program at the TRS/VGJREC: 1 = no defects, exceptionally bright; 2 = excellent, bright; 3 = good, light or golden; 4 = dark defects, marginal; 5 = not acceptable.

Table 10b. Early Generation Trial One. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 114 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Clone** | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| Atlantic | 6 | 8 | 8 | 4 | 6 | 5 | 7 | 5 | 2 | 7 | 6 | 8 | 6 | 30 | 7 | 0 | 0 | 5 | 0 | SR, MS, SS, RZ |
| B2111-80 | 5 | 8 | 8 | 3 | 6 | 6 | 6 | 7 | 1 | 8 | 5 | 8 | 7 | 5 | 8.5 | 0 | 0 | 0 | 0 | SR, MS |
| B2117-218 | 8 | 7 | 8 | 7 | 9 | 6 | 5 | 6 | 2 | 8 | 6 | 8 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | MS, RZ |
| B2122-55 | 9 | 7 | 8 | 5 | 5 | 5 | 7 | 6 | 2 | 7 | 7 | 6 | 5 | 60 | 7.5 | 0 | 0 | 0 | 0 | ^RZ, SG, SS |
| B2122-72 | 6 | 8 | 8 | 6 | 6 | 6 | 5 | 5 | 4 | 7 | 6 | 7 | 5 | 28 | 7.3 | 0 | 0 | 0 | 3 | SG, RZ, GC, SR, SS, MS |
| B2128-13 | 6 | 7 | 8 | 6 | 6 | 6 | 7 | 6 | 3 | 7 | 5 | 7 | 4 | 30 | 7.3 | 0 | 0 | 0 | 0 | ^SG, RZ, MS |
| B2128-133 | 6 | 7 | 8 | 6 | 9 | 8 | 5 | 7 | 4 | 7 | 5 | 7 | 4 | 5 | 8.8 | 0 | 0 | 0 | 0 | ^MS, SG, SS, SR, ^PTS |
| B2128-85 | 6 | 8 | 8 | 5 | 6 | 6 | 5 | 6 | 4 | 8 | 5 | 8 | 6 | 8 | 7.5 | 0 | 0 | 0 | 0 | MS, SS |
| B2130-136 | 8 | 8 | 8 | 5 | 9 | 6 | 5 | 6 | 3 | 8 | 5 | 7 | 5 | 15 | 8 | 0 | 0 | 0 | 0 | SR, MS, RZ, GC |
| B2131-112 | 8 | 8 | 8 | 5 | 6 | 5 | 7 | 7 | 2 | 6 | 6 | 7 | 7 | 68 | 5 | 0 | 0 | 0 | 0 | SR, SS, RZ, MS |
| B2133-18 | 6 | 7 | 8 | 5 | 6 | 6 | 7 | 7 | 2 | 8 | 6 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | RZ, FS, GC |
| B2133-46 | 6 | 8 | 8 | 5 | 5 | 5 | 7 | 6 | 2 | 7 | 7 | 8 | 7 | 0 | 9 | 0 | 0 | 0 | 3 | SR, SS |
| B2133-70 | 8 | 8 | 7 | 6 | 6 | 6 | 6 | 6 | 3 | 7 | 8 | 7 | 6 | 0 | 9 | 0 | 0 | 8 | 0 | RZ, GC, MS |
| B2133-75 | 8 | 8 | 7 | 8 | 6 | 6 | 6 | 6 | 3 | 7 | 5 | 4 | 4 | 8 | 8.8 | 3 | 0 | 5 | 0 | ^RZ, GC, SS |
| B2133-81 | 7 | 8 | 8 | 6 | 6 | 5 | 5 | 5 | 5 | 7 | 6 | 8 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SG |
| Snowden | 8 | 8 | 8 | 7 | 5 | 5 | 7 | 6 | 2 | 5 | 5 | 8 | 4 | 28 | 7 | 0 | 0 | 0 | 0 | MS, SS, DSE, DAE |
| Superior | 6 | 8 | 8 | 4 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 7 | 6 | 3 | 8.8 | 0 | 0 | 0 | 0 | MS, SR |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

Table 11a. Early Generation Yield Trial Two. Total and marketable yield, percentage of total yield by size class, specific gravity, and chip scores of potato clones harvested 114 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| Clone | Selection Location & Year[2] 2000 | 2001 | 2002 | Total Yield cwt/A | Marketable Yield cwt/A | % Atl. | Size Distribution by Class[3] (% of total yield) 1's | 2's | 3's | 4's | 5's | Culls | 1 7/8 to 4" | 2 1/2 to 4" | Specific Gravity[4] | Chip Color[5] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Atlantic | N/A | N/A | N/A | 173 | 127 | 100 | 21 | 65 | 8 | 0 | 0 | 6 | 73 | 8 | 1.063 | 2 |
| B2179-74 | NC | ME | NC | 126 | 76 | 61 | 30 | 55 | 6 | 0 | 0 | 10 | 60 | 6 | 1.053 | 5 |
| B2189-9 | ME | ME | NC | 121 | 87 | 70 | 20 | 61 | 10 | 0 | 0 | 9 | 71 | 10 | 1.051 | 2 |
| B2192-21 | N/M | ME | ME | 111 | 25 | 20 | 72 | 23 | 0 | 0 | 0 | 5 | 23 | 0 | 1.069 | 1 |
| B2193-20 | ME | N/M | NC | 145 | 71 | 54 | 50 | 46 | 1 | 0 | 0 | 2 | 47 | 1 | 1.061 | 1 |
| B2205-9 | NC | NC | ME | 168 | 128 | 100 | 18 | 66 | 9 | 0 | 0 | 7 | 75 | 9 | 1.049 | 2 |
| B2216-103 | ME | NC | NC | 137 | 65 | 52 | 42 | 47 | 1 | 0 | 0 | 10 | 48 | 1 | 1.062 | 2 |
| B2216-151 | NC | N/M | ME | 151 | 93 | 73 | 33 | 59 | 2 | 0 | 0 | 5 | 62 | 2 | 1.056 | 2 |
| B2219-5 | ME | N/M | NC | 193 | 70 | 63 | 35 | 51 | 0 | 0 | 0 | 14 | 51 | 0 | 1.051 | 2 |
| B2219-50 | N/M | NC | NC | 144 | 108 | 86 | 16 | 71 | 4 | 0 | 0 | 9 | 75 | 4 | 1.051 | 2 |
| B2221-122 | ME | ME | NC | 148 | 116 | 91 | 5 | 49 | 28 | 0 | 0 | 17 | 78 | 28 | 1.060 | 3 |
| B2221-195 | ME | ME | NC | 153 | 107 | 84 | 4 | 24 | 43 | 3 | 0 | 26 | 69 | 46 | 1.061 | 2 |
| Snowden | N/A | N/A | N/A | 223 | 166 | 133 | 23 | 64 | 10 | 0 | 0 | 2 | 74 | 10 | 1.065 | 2 |
| Superior | N/A | N/A | N/A | 104 | 79 | 62 | 16 | 66 | 9 | 0 | 0 | 9 | 75 | 9 | 1.055 | 2 |
| Grand Mean | | | | 150 | 94 | | | | | | | | | | | |
| CV(%) | | | | 14 | 22 | | | | | | | | | | | |
| LSD (K= 100) | | | | 29.2 | 27.9 | | | | | | | | | | | |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] NC = North Carolina; ME = Maine; N/M = Selected at both locations

[3] Size classes: 1's < 1 7/8"; 2's > 1 7/8 to 2 1/2"; 3's > 2 1/2 to 3 1/4"; 4's > 3 1/4 to 4"; 5's > 4" Culls = all defective potatoes.

[4] Determined by weight in air/water method.

[5] Chip Color Ratings conducted by the NCSU potato breeding program at the TRS/VGJREC:
1 = no defects, exceptionally bright; 2 = excellent, bright; 3 = good, light or golden; 4 = dark defects, marginal; 5 = not acceptable.

Table 11b. Early Generation Trial Two. Plant vine type, disease and air pollution scores, maturity at ca. 3 weeks prior to harvest, and external and internal tuber attributes of potato clones harvested 114 DAP[1] at the NCSU VGJREC/NCDA TRS, Plymouth, Washington Co., NC - 2004

| | Plant Data[2] | | | | Tuber Data[2] | | | | | | | | | | % Internal Defects[3] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Clone** | TYPE | DIS | POLL | MAT | CLR | TXT | TCX | TSS | SHP | EYE | SIZE | DIS | APP | HN | HNR | HH | VR | BC | SR | Comments[4] |
| Atlantic | 6 | 8 | 8 | 5 | 7 | 5 | 7 | 7 | 2 | 6 | 6 | 7 | 7 | 30 | 8 | 0 | 0 | 0 | 0 | SS, SR, RZ |
| B2179-74 | 5 | 7 | 8 | 3 | 8 | 9 | 6 | 9 | 4 | 8 | 4 | 8 | 8 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SG, SR SS |
| B2189-9 | 8 | 7 | 8 | 7 | 6 | 5 | 7 | 6 | 3 | 7 | 6 | 7 | 5 | 68 | 6 | 8 | 0 | 20 | 0 | MS, GC, SG, SR, IL, RZ |
| B2192-21 | 6 | 8 | 8 | 5 | 8 | 7 | 7 | 7 | 2 | 8 | 2 | 7 | 6 | 0 | 9 | 0 | 3 | 0 | 0 | SS, MS , SG, SR |
| B2193-20 | 7 | 7 | 8 | 6 | 5 | 5 | 7 | 6 | 2 | 7 | 3 | 7 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SR, ^RZ, IL |
| B2205-9 | 6 | 8 | 8 | 4 | 9 | 7 | 7 | 7 | 3 | 8 | 6 | 6 | 5 | 0 | 9 | 3 | 0 | 3 | 0 | ^SG, RZ, SS |
| B2216-103 | 5 | 8 | 9 | 4 | 7 | 7 | 7 | 7 | 3 | 7 | 4 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | MS, SR, RZ, SS |
| B2216-151 | 6 | 8 | 8 | 4 | 9 | 7 | 7 | 7 | 2 | 7 | 5 | 7 | 5 | 0 | 9 | 0 | 0 | 3 | 0 | ^SG, SR, GC |
| B2219-5 | 6 | 8 | 8 | 4 | 6 | 5 | 7 | 6 | 2 | 7 | 4 | 7 | 4 | 0 | 9 | 0 | 0 | 0 | 0 | SR, GC, SG, RZ |
| B2219-50 | 7 | 8 | 8 | 4 | 5 | 5 | 7 | 7 | 2 | 7 | 5 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | ^RZ, SR |
| B2221-122 | 7 | 8 | 8 | 5 | 6 | 6 | 7 | 6 | 2 | 8 | 6 | 5 | 5 | 5 | 8.8 | 0 | 0 | 0 | 3 | ^RZ, MS |
| B2221-195 | 8 | 8 | 8 | 9 | 6 | 6 | 7 | 6 | 2 | 8 | 8 | 3 | 3 | 0 | 9 | 0 | 0 | 0 | 3 | MS, SS, SR, SG |
| Snowden | 8 | 8 | 8 | 6 | 6 | 5 | 7 | 6 | 2 | 5 | 5 | 7 | 6 | 10 | 8.5 | 0 | 0 | 0 | 3 | MS, SS, SR, SG |
| Superior | 8 | 8 | 8 | 4 | 6 | 6 | 7 | 6 | 2 | 6 | 6 | 7 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | BS, MS, RZ, SR |

[1] DAP = Days After Planting; DVK = Days to Vine Kill

[2] See NE1014 Standard Potato Rating System for key to scores in Appendix 2.

[3] Percentage determined from 10 randomly selected potatoes /rep (40 total) in size classes 3 and 4. HN=heat necrosis; HNR=average heat necrosis rating (Rating Scale: 1= very severe to 9 = absent); HH=hollow heart; VR=vascular ring discoloration; BC=brown center; SR=soft rot

[4] See Appendix 4 for Comment Codes

## Appendix 1: LAND MANAGEMENT CONDITIONS

**Location: Black Gold Farms, Gum Neck, Tyrrell Co., NC**

**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Sixteen 21' rows at 38' row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Sencor 1 1/2 pts./A |
| | Matrix .95 oz/A |
| | Select 2.25 oz/A |
| **Fertilizer:** | 150 N, 155 P, 269 K broadcast |
| **Insect Control:** | Thimet 12 lbs/A |
| **Disease Control:** | Dithane 2 lbs/A |
| | Amistar 1.4 oz/A |
| **Irrigation:** | None |
| **Vine Kill:** | None |

**Location: James Brother's Farms, Weeksville, Pasquotank Co., NC**

**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Eighteen 21' rows at 40' row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Sencor 1/2 to 3/4 lbs/A, Poast 1pt/A |
| **Fertilizer:** | 180 N, 80 P, 125 K broadcast |
| **Insect Control:** | Provado 3.75 oz/A |
| **Disease Control:** | Dithane 2 lbs/A |
| **Irrigation:** | None |
| **Vine Kill:** | Paraquat |

**Location: McCotter Farms, Vandemere, Pamlico Co., NC**

**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Fifteen 21' rows at 38' row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | 1/3 lb metribuzin, Dual 1.5pt/A pre-emergence |
| **Fertilizer:** | 1400lbs, 14-4-14 broadcast |
| **Insect Control:** | N/A |
| **Disease Control:** | N/A |
| **Irrigation:** | None |
| **Vine Kill:** | Paraquat |

**Location: Cunningham Research Station, Kinston, Lenoir Co., NC**

**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Thirteen 21' rows at 40' row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Dual 1qt/A pre-emergence |
| | Sencor 1lb/A pre-emergence |
| **Fertilizer:** | 1600lbs, 8-8-8 broadcast, 30% N 25gal |
| **Insect Control:** | Indosulfan 1.5qt/A |
| | Provado 4oz/A |
| **Disease Control:** | N/A |
| **Irrigation:** | 1in/wk |

## Appendix 1: LAND MANAGEMENT CONDITIONS (Cont'd.)

**Location:** Tidewater Research Station, Plymouth, Washington Co., NC
**Trial Title:** Round White Variety Trial One
**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Twenty-two 21' rows at 38' row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Round up 1qt/A (pre-plant) |
| | Surf AC 910 1qt/A (pre-plant) |
| | Sencor 1lb/A (at plant) |
| | Dual Magnum 1.5pt/A (at plant) |
| | Select 2EC 8oz/A (post-plant) |
| | Chemical Oil 83 1qt/A (post-plant) |
| **Fertilizer:** | 750 lbs, 17-17-17 broadcast; |
| | 25 gal, 30-0-0 broadcast |
| **Insect Control:** | Admire 2L 17oz/A |
| | Thiodan 3EC 1.25 qt/A |
| **Disease Control:** | None |
| **Irrigation:** | None |
| **Vine Kill:** | None |

**Location:** Tidewater Research Station, Plymouth, Washington Co., NC
**Trial Title:** Round White Variety Trial Two
**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Fourteen 21' rows at 38' row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Round up 1qt/A (preplant) |
| | Surf AC 910 1qt/A(preplant) |
| | Sencor 1lb/A (at plant) |
| | Dual Magnum 1.5pt/A (at plant) |
| | Select 2EC 8oz/A (post plant) |
| | Chemical Oil 83 1qt/A (post plant) |
| **Fertilizer:** | 750 lbs, 17-17-17 broadcast; |
| | 25 gal, 30-0-0 broadcast |
| **Insect Control:** | Admire 2L 17oz/A |
| | Thiodan 3EC 1.25 qt/A |
| **Disease Control:** | None |
| **Irrigation:** | None |
| **Vine Kill:** | None |

## Appendix 1: LAND MANAGEMENT CONDITIONS (Cont'd.)

**Location:** Tidewater Research Station, Plymouth, Washington Co., NC
**Trial Title:** NE 10-14 White Variety Trial
**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Twenty-two 21' rows at 38' row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Round up 1qt/A (preplant) |
| | Surf AC 910 1qt/A(preplant) |
| | Sencor 1lb/A (at plant) |
| | Dual Magnum 1.5pt/A (at plant) |
| | Select 2EC 8oz/A (post plant) |
| | Chemical Oil 83 1qt/A (post plant) |
| **Fertilizer:** | 750 lbs, 17-17-17 broadcast; |
| | 25 gal, 30-0-0 broadcast |
| **Insect Control:** | Admire 2L 17oz/A |
| | Thiodan 3EC 1.25 qt/A |
| **Disease Control:** | None |
| **Irrigation:** | None |
| **Vine Kill:** | None |

**Location:** Tidewater Research Station, Plymouth, Washington Co., NC
**Trial Title:** NE 10-14 Red Variety Trial
**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Twenty-three 21' rows at 38' row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Round up 1qt/A (preplant) |
| | Surf AC 910 1qt/A(preplant) |
| | Sencor 1lb/A (at plant) |
| | Dual Magnum 1.5pt/A (at plant) |
| | Select 2EC 8oz/A (post plant) |
| | Chemical Oil 83 1qt/A (post plant) |
| **Fertilizer:** | 750 lbs, 17-17-17 broadcast; |
| | 25 gal, 30-0-0 broadcast |
| **Insect Control:** | Admire 2L 17oz/A |
| | Thiodan 3EC 1.25 qt/A |
| **Disease Control:** | None |
| **Irrigation:** | None |
| **Vine Kill:** | None |

## Appendix 1: LAND MANAGEMENT CONDITIONS (Cont'd.)

**Location: Tidewater Research Station, Plymouth, Washington Co., NC**
**Trial Title:** Unreplicated Variety Trial
**Trial Design:** Randomized complete block
**Plot Dimensions:** Sixteen 21' rows at 38" row spacing, 28 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Round up 1qt/A (preplant) |
| | Surf AC 910 1qt/A(preplant) |
| | Sencor 1lb/A (at plant) |
| | Dual Magnum 1.5pt/A (at plant) |
| | Select 2EC 8oz/A (post plant) |
| | Chemical Oil 83 1qt/A (post plant) |
| **Fertilizer:** | 750 lbs, 17-17-17 broadcast; |
| | 25 gal, 30-0-0 broadcast |
| **Insect Control:** | Admire 2L 17oz/A |
| | Thiodan 3EC 1.25 qt/A |
| **Disease Control:** | None |
| **Irrigation:** | None |
| **Vine Kill:** | None |

**Location: Tidewater Research Station, Plymouth, Washington Co., NC**
**Trial Title:** Early Generation Yield Trial One
**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Twenty 18.75' rows at 38" row spacing, 25 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Round up 1qt/A (preplant) |
| | Surf AC 910 1qt/A(preplant) |
| | Sencor 1lb/A (at plant) |
| | Dual Magnum 1.5pt/A (at plant) |
| | Select 2EC 8oz/A (post plant) |
| | Chemical Oil 83 1qt/A (post plant) |
| **Fertilizer:** | 750 lbs, 17-17-17 broadcast; |
| | 25 gal, 30-0-0 broadcast |
| **Insect Control:** | Admire 2L 17oz/A |
| | Thiodan 3EC 1.25 qt/A |
| **Disease Control:** | None |
| **Irrigation:** | None |
| **Vine Kill:** | None |

## Appendix 1: LAND MANAGEMENT CONDITIONS (Cont'd.)

**Location: Tidewater Research Station, Plymouth, Washington Co., NC**
**Trial Title:** Early Generation Yield Trial Two
**Trial Design:** Randomized complete block, four replications
**Plot Dimensions:** Seventeen 18.75' rows at 38" row spacing, 25 hills per row

| | |
|---|---|
| **Seed piece Treatment:** | None |
| **Weed Control:** | Round up 1qt/A (preplant) |
| | Surf AC 910 1qt/A(preplant) |
| | Sencor 1lb/A (at plant) |
| | Dual Magnum 1.5pt/A (at plant) |
| | Select 2EC 8oz/A (post plant) |
| | Chemical Oil 83 1qt/A (post plant) |
| **Fertilizer:** | 750 lbs, 17-17-17 broadcast; |
| | 25 gal, 30-0-0 broadcast |
| **Insect Control:** | Admire 2L 17oz/A |
| | Thiodan 3EC 1.25 qt/A |
| **Disease Control:** | None |
| **Irrigation:** | None |
| **Vine Kill:** | None |

## Appendix 2: STANDARDIZED NE184 RATING CODES FOR PLANT AND TUBER CHARACTERISTICS

### Tuber Color

1. purple
2. red
3. pink
4. dark brown
5. brown
6. tan/light brown
7. buff
8. white
9. cream

### Tuber Texture

1. partial russet
2. heavy russet
3. moderate russet
4. light russet
5. netted
6. slight net
7. moderately smooth
8. smooth
9. very smooth

### Tuber Cross-section

1. very flat
2. --
3. flat
4. --
5. intermediate/oval
6. --
7. mostly round
8. --
9. very round

### Tuber Skin Set

1. very poor
2 --
3. poor
4 --
5. fair
6 --
7. good
8 --
9. excellent

### Tuber Shape

1. very round
2. mostly round
3. round to oblong
4. mostly oblong
5. oblong
6. oblong to long
7. mostly long
8. long
9. cylindrical

### Tuber Eye Depth

1. -
2. deep
3. +
4. -
5. medium
6. +
7. -
8. shallow
9. +

### Tuber Size (GCY Scale)

1. small
2. --
3. small-medium
4. --
5. medium
6. --
7. medium-large
8. --
9. large

### Tuber Appearance

1. very poor
2. --
3. poor
4. --
5. fair
6. --
7. good
8. --
9. excellent

### Tuber Disease Rating

1. very severe
2. --
3. severe
4. --
5. moderate
6. borderline
7. slight
8. very slight
9. none

### Plant Type

1. decumbent-poor canopy
2. decumbent-fair canopy
3. decumbent-good canopy
4. spreading-poor canopy
5. spreading-fair canopy
6. spreading-good canopy
7. upright-poor canopy
8. upright-fair canopy
9. upright-good canopy

### Plant Disease and Pollution Reaction

1. Dead
2. -
3. severe
4. +
5. moderate
6. -
7. +
8. slight
9. none

### Maturity

1. -
2. early
3. +
4. -
5. medium
6. +
7. -
8. late
9. +

## Appendix 3: WEEKLY WEATHER DATA

### Tyrrell Co. [1]

| week | Max Temp | Min Temp | Mean Temp | 30yr Mean Temp | Temp Dev | Precip (in) | 30 yr Precip | Precip Dev |
|---|---|---|---|---|---|---|---|---|
| 1/5 - 1/11 | 56 | 37 | 47 | 43 | 4 | 0.45 | 0.93 | -0.48 |
| 1/12 - 1/18 | 48 | 23 | 36 | 43 | - 7 | 0.16 | 0.98 | -0.82 |
| 1/19 - 1/25 | . | . | . | 42 | . | 0 | 0.96 | -0.96 |
| 1/26 - 2/1 | 40 | 30 | 35 | 42 | - 7 | 1.04 | 0.9 | 0.14 |
| 2/2 - 2/8 | 50 | 30 | 41 | 42 | - 2 | 0.25 | 0.82 | -0.57 |
| 2/9 - 2/15 | . | 34 | . | 43 | . | 0.03 | 0.77 | -0.74 |
| 2/16 - 2/22 | 53 | 31 | 43 | 44 | - 2 | 0.5 | 0.77 | -0.27 |
| 2/23 - 2/29 | 48 | 34 | 42 | 46 | - 4 | 1.14 | 0.83 | 0.31 |
| 3/1 - 3/7 | . | . | . | 48 | . | 0 | 0.9 | -0.9 |
| 3/8 - 3/14 | 64 | 33 | 49 | 50 | - 1 | 0.48 | 0.95 | -0.47 |
| 3/15 - 3/21 | 58 | 44 | 51 | 52 | - 2 | 2.63 | 0.98 | 1.65 |
| 3/22 - 3/28 | 55 | 35 | 43 | 54 | -11 | 0.05 | 0.92 | -0.87 |
| 3/29 - 4/4 | 55 | 43 | 50 | 56 | - 6 | 0.64 | 0.87 | -0.23 |
| 4/5 - 4/11 | 70 | 40 | 55 | 58 | - 2 | 0 | 0.8 | -0.8 |
| 4/12 - 4/18 | 72 | 50 | 61 | 60 | 2 | 0.75 | 0.77 | -0.02 |
| 4/19 - 4/25 | 84 | 60 | 72 | 61 | 11 | 0 | 0.72 | -0.72 |
| 4/26 - 5/2 | 73 | 50 | 61 | 63 | - 2 | 1.68 | 0.7 | 0.98 |
| 5/3 - 5/9 | 75 | 56 | 66 | 65 | 1 | 2.89 | 0.76 | 2.13 |
| 5/10 - 5/16 | 84 | 64 | 74 | 67 | 7 | 0 | 0.77 | -0.77 |
| 5/17 - 5/23 | 85 | 65 | 75 | 68 | 7 | 0.28 | 0.83 | -0.55 |
| 5/24 - 5/30 | 88 | 70 | 79 | 70 | 9 | 0.14 | 0.89 | -0.75 |
| 5/31 - 6/6 | 76 | 66 | 74 | 73 | 1 | 1.11 | 0.97 | 0.14 |
| 6/7 - 6/13 | 84 | 66 | 76 | 74 | 1 | 2.35 | 1.07 | 1.28 |
| 6/14 - 6/20 | 84 | 71 | 78 | 76 | 2 | 0.24 | 1.15 | -0.91 |
| 6/21 - 6/27 | 85 | 64 | 76 | 77 | - 1 | 0.88 | 1.23 | -0.35 |
| 6/28 - 7/4 | 83 | 68 | 76 | 78 | - 2 | 2.02 | 1.3 | 0.72 |
| 7/5 - 7/11 | . | 73 | . | 79 | . | 0.07 | 1.37 | -1.3 |
| 7/12 - 7/18 | 88 | 69 | 79 | 79 | 0 | 1.1 | 1.4 | -0.3 |
| 7/19 - 7/25 | 84 | 69 | 76 | 80 | - 3 | 2.98 | 1.43 | 1.55 |
| 7/26 - 7/31 | 83 | 72 | 79 | 79 | - 1 | 3.02 | 1.04 | 1.98 |
| | | | | | Total | 26.88 | 28.78 | -1.9 |

## Appendix 3: WEEKLY WEATHER DATA (cont'd)

### Pasquotank Co.

| week | Max Temp | Min Temp | Mean Temp | 30yr Mean Temp | Temp Dev | Precip (in) | 30 yr Precip | Precip Dev |
|---|---|---|---|---|---|---|---|---|
| 1/5 - 1/11 | 49 | 31 | 40 | 43 | - 3 | 0.17 | 1.04 | -0.87 |
| 1/12 - 1/18 | 45 | 28 | 37 | 42 | - 5 | 0.07 | 1.12 | -1.05 |
| 1/19 - 1/25 | 46 | 24 | 36 | 42 | - 6 | 0.25 | 1.03 | -0.78 |
| 1/26 - 2/1 | 39 | 29 | 34 | 42 | - 8 | 0.68 | 0.95 | -0.27 |
| 2/2 - 2/8 | 57 | 35 | 46 | 43 | 4 | 0.29 | 0.8 | -0.51 |
| 2/9 - 2/15 | 50 | 37 | 44 | 43 | 1 | 0.62 | 0.7 | -0.08 |
| 2/16 - 2/22 | 52 | 36 | 44 | 45 | - 1 | 0.93 | 0.74 | 0.19 |
| 2/23 - 2/29 | 49 | 35 | 42 | 46 | - 4 | 0.12 | 0.86 | -0.74 |
| 3/1 - 3/7 | 75 | 54 | 64 | 48 | 16 | 0.09 | 1.03 | -0.94 |
| 3/8 - 3/14 | 54 | 37 | 46 | 50 | - 4 | 0.82 | 1.12 | -0.3 |
| 3/15 - 3/21 | 57 | 43 | 50 | 52 | - 2 | 1.11 | 1.12 | -0.01 |
| 3/22 - 3/28 | 60 | 42 | 51 | 54 | - 2 | 0 | 1.02 | -1.02 |
| 3/29 - 4/4 | 57 | 44 | 51 | 55 | - 5 | 0.65 | 0.84 | -0.19 |
| 4/5 - 4/11 | 68 | 44 | 56 | 57 | - 1 | 0.08 | 0.69 | -0.61 |
| 4/12 - 4/18 | 73 | 51 | 62 | 59 | 3 | 1.22 | 0.63 | 0.59 |
| 4/19 - 4/25 | 80 | 60 | 70 | 61 | 9 | 0 | 0.67 | -0.67 |
| 4/26 - 5/2 | 74 | 56 | 66 | 63 | 3 | 1.46 | 0.8 | 0.66 |
| 5/3 - 5/9 | 74 | 58 | 66 | 65 | 2 | 2.53 | 0.95 | 1.58 |
| 5/10 - 5/16 | 85 | 66 | 76 | 67 | 9 | 0 | 1.05 | -1.05 |
| 5/17 - 5/23 | 86 | 68 | 77 | 68 | 9 | 0.38 | 1.05 | -0.67 |
| 5/24 - 5/30 | 87 | 68 | 77 | 71 | 7 | 1.4 | 1.01 | 0.39 |
| 5/31 - 6/6 | 85 | 67 | 76 | 72 | 4 | 1.16 | 0.89 | 0.27 |
| 6/7 - 6/13 | 84 | 68 | 76 | 74 | 2 | 1.14 | 0.84 | 0.3 |
| 6/14 - 6/20 | 88 | 74 | 81 | 76 | 6 | 0.89 | 0.84 | 0.05 |
| 6/21 - 6/27 | 84 | 69 | 77 | 77 | 0 | 3 | 0.88 | 2.12 |
| 6/28 - 7/4 | 83 | 71 | 77 | 78 | - 1 | 1.09 | 1.01 | 0.08 |
| 7/5 - 7/11 | 91 | 72 | 82 | 79 | 3 | 1.48 | 1.11 | 0.37 |
| 7/12 - 7/18 | 90 | 71 | 81 | 79 | 1 | 3.05 | 1.16 | 1.89 |
| 7/19 - 7/25 | 85 | 71 | 79 | 80 | - 1 | 1.44 | 1.15 | 0.29 |
| 7/26 - 7/31 | 86 | 75 | 80 | 79 | 1 | 1.28 | 0.8 | 0.48 |
| | | | | | Total | 27.4 | 27.9 | -0.5 |

## Appendix 3: WEEKLY WEATHER DATA (cont'd)

### Pamlico Co. [1]

| week | Max Temp | Min Temp | Mean Temp | 30yr Mean Temp | Temp Dev | Precip (in) | 30 yr Precip | Precip Dev |
|---|---|---|---|---|---|---|---|---|
| 1/5 - 1/11 | 49 | 31 | 40 | 45 | - 5 | 0.2 | 1.05 | -0.85 |
| 1/12 - 1/18 | 57 | 27 | 43 | 44 | - 1 | 0.25 | 1.05 | -0.8 |
| 1/19 - 1/25 | 53 | 25 | 39 | 45 | - 6 | 0.25 | 1.04 | -0.79 |
| 1/26 - 2/1 | 46 | 28 | 37 | 45 | - 8 | 0.56 | 0.95 | -0.39 |
| 2/2 - 2/8 | 61 | 34 | 47 | 46 | 2 | 0.5 | 0.86 | -0.36 |
| 2/9 - 2/15 | 51 | 36 | 44 | 46 | - 3 | 1.69 | 0.78 | 0.91 |
| 2/16 - 2/22 | 55 | 32 | 44 | 48 | - 4 | 1.06 | 0.77 | 0.29 |
| 2/23 - 2/29 | 52 | 34 | 43 | 49 | - 6 | 1.48 | 0.71 | 0.77 |
| 3/1 - 3/7 | 77 | 51 | 64 | 51 | 14 | 0 | 0.9 | -0.9 |
| 3/8 - 3/14 | 57 | 35 | 46 | 52 | - 6 | 0.43 | 0.95 | -0.52 |
| 3/15 - 3/21 | 64 | 44 | 54 | 54 | 0 | 2.05 | 0.96 | 1.09 |
| 3/22 - 3/28 | 66 | 37 | 51 | 56 | - 4 | 0.1 | 0.91 | -0.81 |
| 3/29 - 4/4 | 60 | 44 | 53 | 58 | - 5 | 0.87 | 0.82 | 0.05 |
| 4/5 - 4/11 | 72 | 45 | 59 | 59 | - 1 | 1.05 | 0.77 | 0.28 |
| 4/12 - 4/18 | 71 | 47 | 60 | 61 | - 1 | 1.96 | 0.73 | 1.23 |
| 4/19 - 4/25 | 81 | 61 | 71 | 63 | 8 | 0 | 0.77 | -0.77 |
| 4/26 - 5/2 | 76 | 54 | 65 | 65 | 0 | 1.91 | 0.87 | 1.04 |
| 5/3 - 5/9 | 80 | 56 | 68 | 67 | 2 | 1.24 | 0.98 | 0.26 |
| 5/10 - 5/16 | 84 | 61 | 73 | 68 | 5 | 0 | 1.07 | -1.07 |
| 5/17 - 5/23 | 87 | 66 | 77 | 70 | 7 | 0.01 | 1.12 | -1.11 |
| 5/24 - 5/30 | 89 | 69 | 80 | 72 | 8 | 0.25 | 1.12 | -0.87 |
| 5/31 - 6/6 | 87 | 68 | 78 | 73 | 4 | 0 | 1.11 | -1.11 |
| 6/7 - 6/13 | 86 | 67 | 77 | 75 | 2 | 1.02 | 1.05 | -0.03 |
| 6/14 - 6/20 | 87 | 71 | 79 | 76 | 3 | 1.32 | 1.11 | 0.21 |
| 6/21 - 6/27 | 86 | 69 | 78 | 78 | 0 | 2.71 | 1.14 | 1.57 |
| 6/28 - 7/4 | 83 | 71 | 77 | 78 | - 1 | 0.05 | 1.22 | -1.17 |
| 7/5 - 7/11 | . | . | . | 79 | . | . | 1.31 | . |
| 7/12 - 7/18 | . | . | . | 80 | . | . | 1.41 | . |
| 7/19 - 7/25 | . | . | . | 80 | . | . | 1.5 | . |
| 7/26 - 7/31 | . | . | . | 80 | . | . | 1.36 | . |
| | | | | | Total | 20.96 | 30.39 | -3.85 |

## Appendix 3: WEEKLY WEATHER DATA (cont'd)

### Lenoir Co.

| week | Max Temp | Min Temp | Mean Temp | 30yr Mean Temp | Temp Dev | Precip (in) | 30 yr Precip | Precip Dev |
|---|---|---|---|---|---|---|---|---|
| 1/5 - 1/11 | 50 | 29 | 40 | 45 | - 5 | 0.39 | 0.98 | -0.59 |
| 1/12 - 1/18 | 51 | 24 | 38 | 44 | - 6 | 0.15 | 0.99 | -0.84 |
| 1/19 - 1/25 | 50 | 25 | 38 | 44 | - 7 | 0 | 0.98 | -0.98 |
| 1/26 - 2/1 | 40 | 25 | 33 | 45 | -12 | 0.53 | 0.96 | -0.43 |
| 2/2 - 2/8 | 56 | 31 | 44 | 46 | - 2 | 0.53 | 0.9 | -0.37 |
| 2/9 - 2/15 | 50 | 36 | 43 | 47 | - 3 | 1.31 | 0.84 | 0.47 |
| 2/16 - 2/22 | 54 | 32 | 43 | 48 | - 4 | 0.98 | 0.87 | 0.11 |
| 2/23 - 2/29 | 50 | 32 | 41 | 50 | - 8 | 1.48 | 0.93 | 0.55 |
| 3/1 - 3/7 | 77 | 47 | 62 | 51 | 11 | 0.02 | 0.98 | -0.96 |
| 3/8 - 3/14 | 61 | 34 | 48 | 53 | - 5 | 0.01 | 1.05 | -1.04 |
| 3/15 - 3/21 | 62 | 40 | 51 | 55 | - 4 | 0.5 | 1.02 | -0.52 |
| 3/22 - 3/28 | 67 | 36 | 52 | 57 | - 5 | 0.13 | 0.95 | -0.82 |
| 3/29 - 4/4 | 63 | 41 | 52 | 58 | - 6 | 0.29 | 0.86 | -0.57 |
| 4/5 - 4/11 | 72 | 41 | 57 | 60 | - 3 | 0.4 | 0.76 | -0.36 |
| 4/12 - 4/18 | 72 | 47 | 60 | 62 | - 2 | 2.62 | 0.7 | 1.92 |
| 4/19 - 4/25 | 84 | 58 | 71 | 64 | 7 | 0 | 0.7 | -0.7 |
| 4/26 - 5/2 | 75 | 52 | 64 | 66 | - 2 | 2.4 | 0.76 | 1.64 |
| 5/3 - 5/9 | 77 | 56 | 67 | 68 | - 1 | 2.52 | 0.81 | 1.71 |
| 5/10 - 5/16 | 86 | 60 | 73 | 70 | 3 | 0 | 0.87 | -0.87 |
| 5/17 - 5/23 | 87 | 65 | 77 | 72 | 5 | 0.02 | 0.91 | -0.89 |
| 5/24 - 5/30 | 90 | 69 | 79 | 73 | 6 | 0.38 | 0.96 | -0.58 |
| 5/31 - 6/6 | 85 | 65 | 75 | 75 | 1 | 1.98 | 0.98 | 1 |
| 6/7 - 6/13 | 85 | 67 | 76 | 76 | 0 | 3.48 | 1.02 | 2.46 |
| 6/14 - 6/20 | 85 | 70 | 78 | 78 | 1 | 0.94 | 1.05 | -0.11 |
| 6/21 - 6/27 | 86 | 68 | 77 | 79 | - 2 | 1.31 | 1.11 | 0.2 |
| 6/28 - 7/4 | 85 | 70 | 78 | 80 | - 2 | 1.48 | 1.17 | 0.31 |
| 7/5 - 7/11 | 92 | 71 | 81 | 81 | 0 | 1.87 | 1.19 | 0.68 |
| 7/12 - 7/18 | 89 | 69 | 80 | 81 | - 2 | 0.47 | 1.19 | -0.72 |
| 7/19 - 7/25 | 87 | 69 | 78 | 81 | - 3 | 0.97 | 1.2 | -0.23 |
| 7/26 - 7/31 | 86 | 71 | 79 | 81 | - 2 | 0.84 | 0.85 | -0.01 |
| | | | Total | 28 | 28.54 | -0.54 | | |

## Appendix 3: WEEKLY WEATHER DATA (cont'd)

### Washington Co.[1]

| week | Max Temp | Min Temp | Mean Temp | 30yr Mean Temp | Temp Dev | Precip (in) | 30 yr Precip | Precip Dev |
|---|---|---|---|---|---|---|---|---|
| 1/5 - 1/11 | 49 | 31 | 40 | 44 | - 4 | 0.49 | 1.03 | -0.54 |
| 1/12 - 1/18 | 53 | 29 | 41 | 43 | - 2 | 0.27 | 1.06 | -0.79 |
| 1/19 - 1/25 | 47 | 26 | 37 | 43 | - 7 | 0.47 | 1.05 | -0.58 |
| 1/26 - 2/1 | 42 | 26 | 34 | 44 | -10 | 0.55 | 0.99 | -0.44 |
| 2/2 - 2/8 | 55 | 33 | 44 | 44 | 0 | 0.28 | 0.86 | -0.58 |
| 2/9 - 2/15 | 51 | 34 | 43 | 45 | - 3 | 0.88 | 0.84 | 0.04 |
| 2/16 - 2/22 | 55 | 34 | 45 | 47 | - 2 | 1.15 | 0.84 | 0.31 |
| 2/23 - 2/29 | 51 | 32 | 42 | 48 | - 6 | 0.99 | 0.92 | 0.07 |
| 3/1 - 3/7 | 75 | 52 | 64 | 50 | 13 | 0.1 | 1.03 | -0.93 |
| 3/8 - 3/14 | 58 | 35 | 47 | 52 | - 5 | 0.7 | 1.11 | -0.41 |
| 3/15 - 3/21 | 62 | 43 | 53 | 54 | - 1 | 1.52 | 1.12 | 0.4 |
| 3/22 - 3/28 | 63 | 40 | 51 | 56 | - 4 | 0 | 1.04 | -1.04 |
| 3/29 - 4/4 | 57 | 44 | 51 | 57 | - 7 | 0.42 | 0.93 | -0.51 |
| 4/5 - 4/11 | 71 | 45 | 58 | 59 | - 1 | 0.11 | 0.82 | -0.71 |
| 4/12 - 4/18 | 73 | 48 | 61 | 61 | 0 | 1.51 | 0.77 | 0.74 |
| 4/19 - 4/25 | 82 | 59 | 71 | 63 | 8 | 0 | 0.77 | -0.77 |
| 4/26 - 5/2 | 77 | 53 | 65 | 65 | 1 | 1.51 | 0.85 | 0.66 |
| 5/3 - 5/9 | 78 | 56 | 67 | 66 | 1 | 1.56 | 0.94 | 0.62 |
| 5/10 - 5/16 | 85 | 64 | 75 | 68 | 7 | 0.24 | 1.01 | -0.77 |
| 5/17 - 5/23 | 88 | 66 | 78 | 70 | 8 | 0.6 | 1.06 | -0.46 |
| 5/24 - 5/30 | 88 | 68 | 78 | 72 | 6 | 0.96 | 1.12 | -0.16 |
| 5/31 - 6/6 | 86 | 66 | 76 | 74 | 2 | 2.88 | 1.12 | 1.76 |
| 6/7 - 6/13 | 85 | 66 | 76 | 75 | 1 | 1.73 | 1.19 | 0.54 |
| 6/14 - 6/20 | 86 | 72 | 79 | 77 | 3 | 1.21 | 1.19 | 0.02 |
| 6/21 - 6/27 | 86 | 69 | 78 | 78 | 0 | 2.57 | 1.19 | 1.38 |
| 6/28 - 7/4 | 83 | 70 | 77 | 79 | - 2 | 1.41 | 1.19 | 0.22 |
| 7/5 - 7/11 | . | . | . | 80 | . | . | 1.19 | . |
| 7/12 - 7/18 | . | . | . | 80 | . | . | 1.19 | . |
| 7/19 - 7/25 | . | . | . | 80 | . | . | 1.19 | . |
| 7/26 - 7/31 | . | . | . | 80 | . | . | 0.89 | . |
| | | | | | Total | 24.11 | 30.5 | -1.93 |

[1] **Note:** Totals for Tyrrell and Washington counties may be inaccurate because of missing data
SOURCE: NCDA via National Climate Center, National Oceanic and Atmospheric Administration.

## Appendix 4: COMMENT CODES FOR TABLE B

AC=air cracks
BR=bruise
CPB=colorado potato beetle
CS=common scab
CT=chain tubers
DAE=deep apical eyes
DSE=deep stolen end
EB=early blight
ECB= European corn borer
EL= enlarged lenticels
FS=fusarium wilt
GC=growth cracks
HI= herbicide injury
HS=heat sprouts;
IL=infected lenticels
LB=late blight
LHD=leaf hopper damage
MS=misshaped tubers
PE=pink eye
PR=pink rot
PLRV=potato leaf roll virus
PTS=very pointed tubers
PS=powdery scab
PVA, PVX, PVY=potato viruses A, X, Y
RF=red flesh (RF scale: 1=light red to 3=dark red)
RZ=Rhizoctonia
SEB=stem end browning
SC = star cracking
SG=secondary growth
SIS=silver scurf
SKN=skins
SS=sun scald
SR=soft rot
STST=sticky stolens
TSWV=Tomato Spotted Wilt Virus
VW=Verticillium wilt
WSTD=weak stand
WW=wire worm
YF=yellow flesh (YF scale: 1=light yellow to 3=dark yellow)

**Note:** ^ before code = high levels; ^^ = very high; ~ = moderate or some