



2023-2024 Variety Trial Overview

MPIC

**Winter Potato
Conference**

“Let’s talk.....”

January 31st, 2024

Chris Long Potato Specialist

MSU Potato Outreach Program Lead





https://msupotato.medius.re

Medius.Re x +

msupotato.medius.re

Research. Reclaimed.

Michigan State University > Potato

Log In

Dashboard

Reliable data. Collaborative insight. Better Decision.

8,939 Variety Records 12,769 Images 108 Documents

MICHIGAN STATE UNIVERSITY

TRIALS ANALYTICS DOCUMENTS COMPARISON

MICHIGAN STATE UNIVERSITY TRIAL GROUPS

MSU Chip Trials

- MSU Russet Trials
- MSU Tablestock Trials
- MPIC Research Trials

MSU CHIP TRIALS

MSUC

General	
Replicates	string

Research Data	
Partner	id
Partner Location	id
Planting Date	weather_start_date
VineKill Date	datetime
Harvest Date	weather_end_date
Yield No1	cwt/A ① number
Yield Total	cwt/A number
% No1	% percent
Size Small	% ① percent
Size Mid	% ① percent

Trials Analytics Comparison Documents

Find Variety..

LATEST MSUC TRIALS

2022 > MSUC > Sandyland
MRC 2022 Bulk Bin 2 Sandyland
Research Data Plant Materials

2022 > MSUC > Sandyland
Sandyland 2022 SNAC Storage Chip Trial
MSU-MI | Sandyland
Research Data Storage Plant Materials

2021 > MSUC > MSU-MI
2021 Black Spot Bruise Chip Trial
MSU-MI
Plant Materials

2022 > MSUC > MSU-MI
MRC 2022 Chip Box Bin Trial
MSU-MI
Plant Materials

2022 > MSUC > Hampton - Storage
Hampton 2022 Storage Chip Trial
MSU-MI | Hampton Potato Growers
Research Data

2021 TO 2022 SNAC OUT OF STORAGE REPORT

Michigan State University Montcalm Research Center
MPIC Demonstration Storage

Investigators: Chris Long, Potato Extension Specialist, clongch@msu.edu
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Damen Kurzer, Research Technician, kurzerda@msu.edu

Objective: To assess the storability of seven chipping varieties by evaluating sugar concentrations, chip color, and visual defects during storage.

Materials and Methods:
The MSU Potato Outreach Program planted seed at Sandyland Farms, LLC, in Howard City, MI on May 17, 2021 at 10" within row spacing and 34" between row spacing. Vine kill

RECENTLY SEARCHED VARIETIES

W1512S-4	Atlantic x W10670-3	
Atlantic	Waukegan x Lenape	
USDA-MD		
W13A1122S-1rus	University of Wisconsin	
W1524B-17Y	University of Wisconsin	Oneda Gold x W9576-13Y

Williamston

36°F overcast clouds

overcast clouds	moderate rain	broken clouds
37°F	39°F	33°F
Wed - Jan 18	Thu - Jan 19	Fri - Jan 20

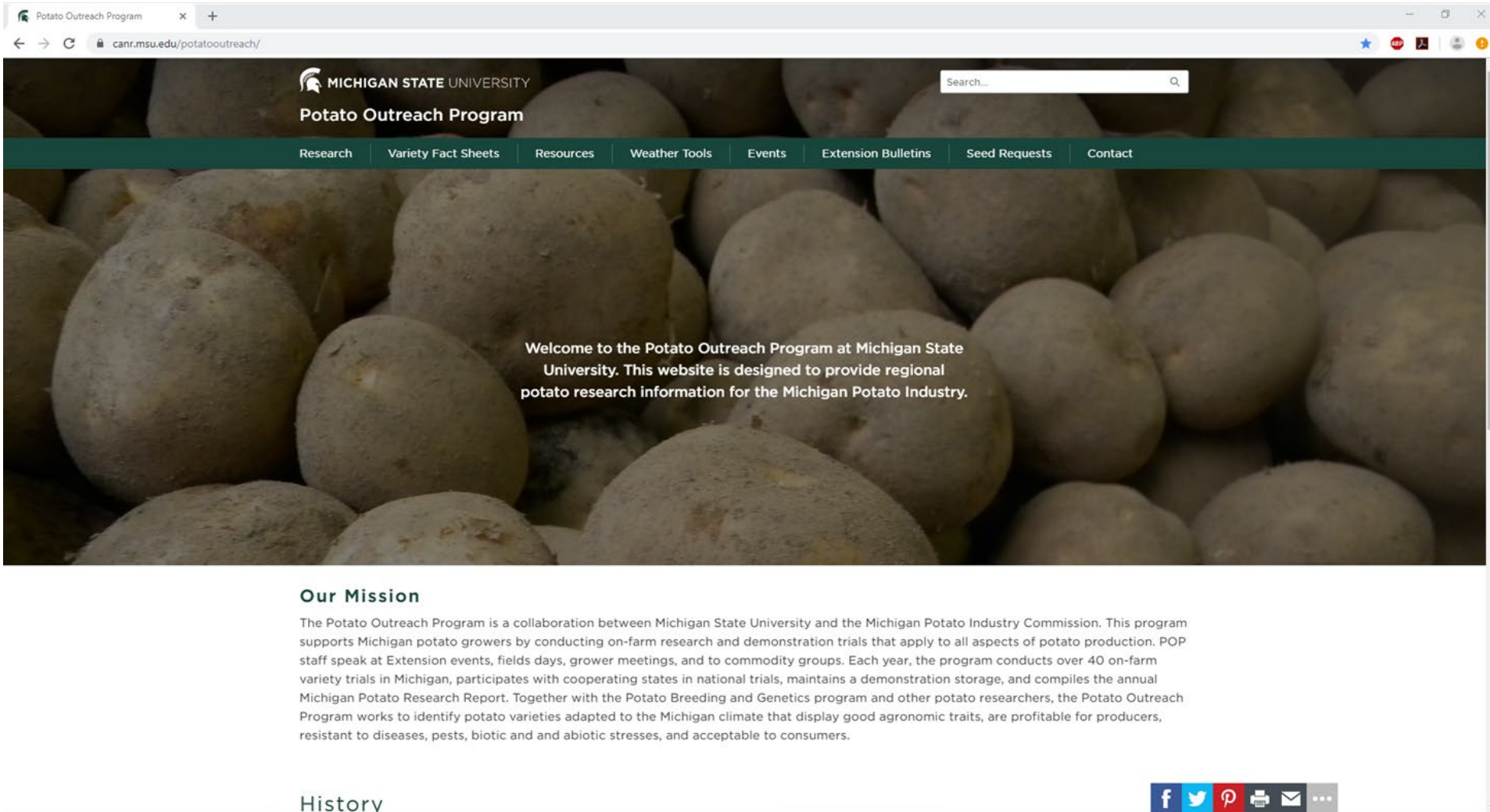
DATA STRUCTURE - EXPLAINED

Trial Groups

Trial Groups are the top tier of the research data structure. Each trial group contains a pre-defined set of data fields that make the data collected within it consistent. Trial groups are often used to separate different categories within a commodity, different research focus or to distinguish between researches work.



<https://canr.msu.edu/potatooutreach/>





Overview

- **Chipper**
 - **Bliss (NY163), MSBB058-1, MSDD247-11**
- **Russets**
 - **A12327-5VR, Portage Russet, A08433-4STO, AF5707-1, etc....**
- **Yellow / Reds / White**
 - **Colomba, Constance, MSGG039-11Y, W13103-2Y, etc.....**
NDAF113484B-1,
05.6556.1, Noya



Bliss (NY163)

Atlantic or Pike replacement out of the field and short-term storage

NYE50-8 X NYE48-2

Strengths

- Above average SG across the US 1.082 (1.077-1.095)
- Good raw internal tuber quality
- Above average tuber set / plant
- Excellent mid-season storage chip quality
- Common scab tolerant
- Earlier maturity than Snowden
- Minimal sugar hang-over after harvest



Bliss (NY163)

Atlantic or Pike replacement out of the field and short-term storage

NYE50-8 X NYE48-2

Weaknesses

- Yield potential below average at 10 inch in-row spacing
- Below average percent US#1 and mid size tubers
- Thin skinned higher storage rot potential
- Chip blistering observed in 2020 crop, but NOT in 2021 or 2022 crops



Bliss (NY163)

MSU POP Trials
Medius.re Data;
Compare
2016, 2019-2023
6-year averages

Correlated data
31 trial records

		Lamoka	Snowden	Mackinaw	Bliss
Trial					
Variety Records		30	30	31	31
Research					
Yield No1	cwt/a	419	500	489	445
Yield Total	cwt/a	475	565	546	511
% No1	%	87.5%	87.4%	89.7%	85.9%
Size Small	%	8.9%	11.2%	7.9%	11.3%
Size Mid	%	85.5%	86.3%	88.0%	84.4%
Size Large	%	2.0%	1.1%	1.7%	1.6%
% Culls	%	3.6%	1.3%	2.7%	2.8%
Specific Gravity	1.###	1.081	1.084	1.086	1.082
SFA Chip Color		1.3	1.3	1.3	1.0
Hollow Heart	%	0.7%	8.2%	0.7%	0.4%
Vascular Discoloration	%	9.7%	10.7%	8.2%	5.5%
Internal Brown Spots	%	2.2%	2.8%	2.6%	0.1%
Brown Center	%	0.4%	0.1%	0.3%	0.1%
Common Scab Rating		1.1	1.5	0.8	0.7
Stem End Defect		0.7	0.5	0.5	0.3
Plant Vigor		3.5	3.3	3.1	3.2
Vine Maturity		2.6	2.9	3.0	2.5
Storage					
SNaC Color		1.2	1.4	1.4	1.3
Defects Total	%	4.0%	8.4%	5.3%	2.5%



Bliss (NY163)

SNAC Data Storage 2020-2022

Correlated 24 trial records

		Lamoka	Snowden	Bliss
Field Data				
Specific Gravity	1.###	1.088	1.087	1.089
Tubers/Plant		8.0	9.6	10.4
Yield Total	cwt/a	413.9	439.0	422.7
Yield No1	cwt/a	362.0	372.9	350.3
% Culls	%	4.6%	2.6%	3.1%
% No1	%	85.7%	82.0%	79.5%
Size Small	%	10.3%	15.8%	19.0%
Size Mid	%	80.3%	77.3%	76.9%
Size Large	%	6.7%	5.1%	2.2%
Hollow Heart	%	0%	4%	0%
Heat Necrosis	%	1.4%	0.0%	0.0%
Process Data				
Specific Gravity	1.###	1.084	1.085	1.086
SFA Chip Color		1.9	2.1	1.7
Color Score		69.0	66.8	70.7
Defect Total	%	10.5%	12.7%	9.0%
Storage Data				
Specific Gravity	1.###	1.087	1.086	1.089
SNAC Color		1.6	1.8	1.4
Hunter L		64.19	61.81	65.26
Defects Total	%	15.7%	13.9%	7.0%



Bliss (NY163)

2022-2023 PUSA NexGen, MPIC Bulk Bin #2
Sandyland Farm, BSB Free: 51.2%, B/T: 1.5

Planted: 5.20.22

Vine Kill: 9.1.22

Harvested: 10.7.22

GDD40: 2919

Sample Date: 4.3.23

Storage Temp. 48.0 °F

SFA Color: 1.0

Sucrose: 0.391 mg/g

Glucose: 0.010 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 0.0%

Green: 1.9%

Tot. Def: 1.9%





Bliss (NY163)

2022-2023 PUSA NexGen, MPIC Box Bin #7
Sandyland Farm

Planted: 5.20.22

Vine Kill: 9.1.22

Harvested: 10.7.22

GDD40: 2919

Sample Date: 4.17.23

Storage Temp. 54.6 °F

SFA Color: 1.0

Sucrose: 0.667 mg/g

Glucose: 0.080 mg/g

Undes: 0.0%

Intrn: 27.4%

Extrn: 0.0%

Green: 2.2%

Tot. Def: 29.6%





2022-2023 “Highlight”

4.11.23
Bliss (NY163)
Unloaded





2022-2023 “Highlight”





Bliss (NY163)

2021-2022 PUSA NexGen, MPIC Bulk Bin #2

Sandyland Farm, BSB Free: 72.0%, B/T: 0.4

Planted: 5.11.21

Vine Kill: 9.8.21

Harvested: 10.8.21

GDD40: 3369

Sample Date: 3.14.22

Storage Temp. 44.8 °F

SFA Color: 1.0

Sucrose: 0.819 mg/g

Glucose: 0.090 mg/g

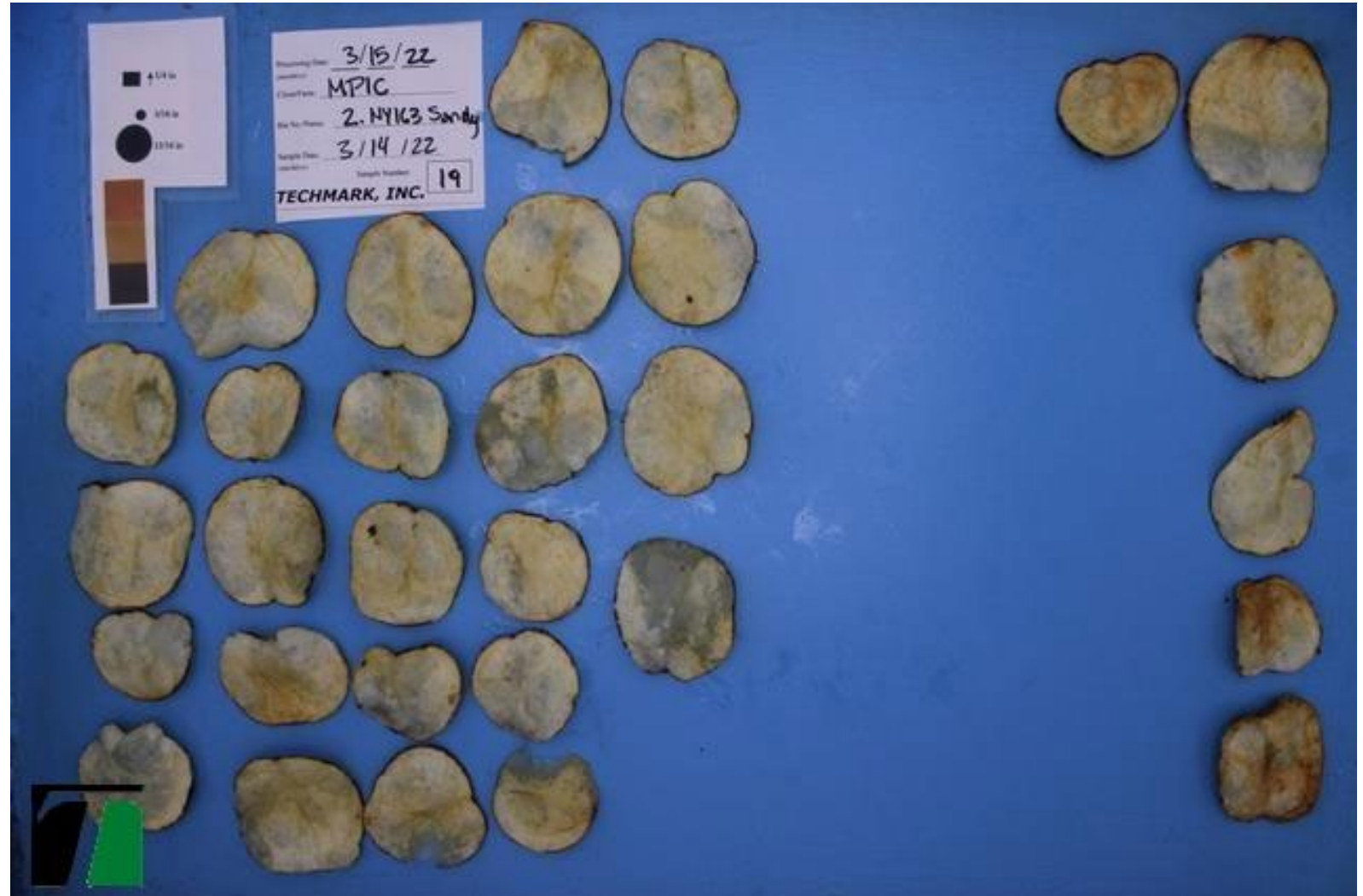
Undes: 0.0%

Intrn: 0.0%

Extrn: 20.1%

Green: 0.0%

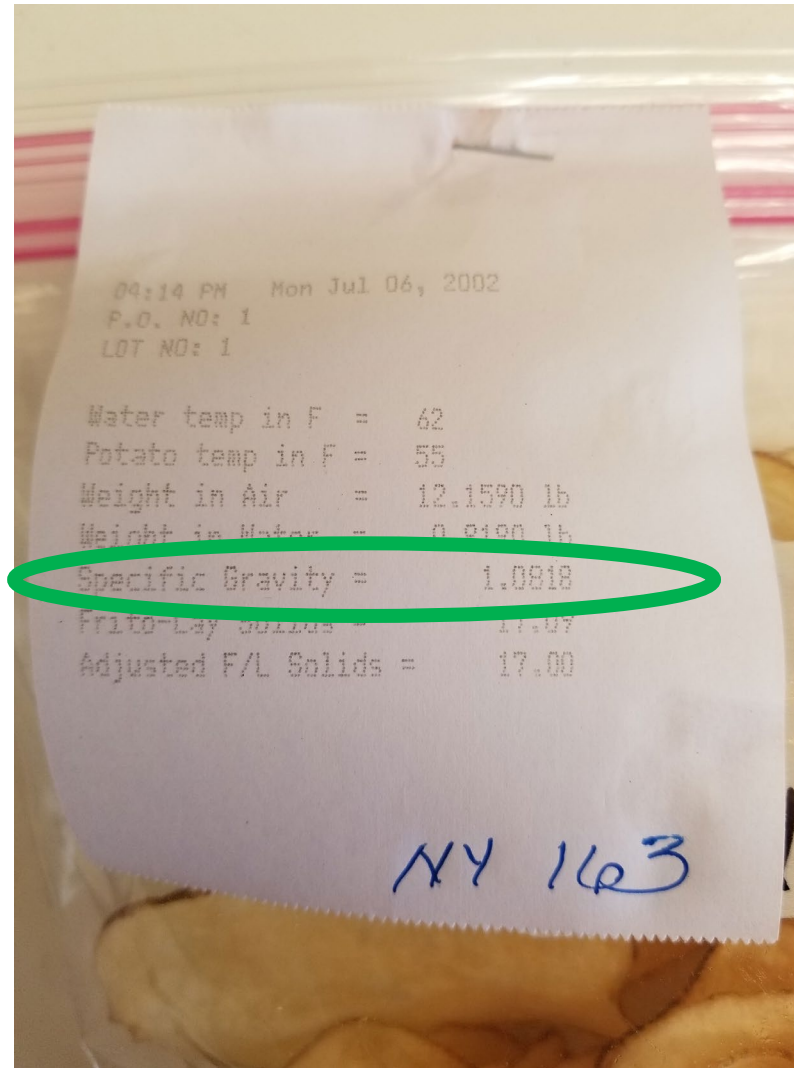
Tot. Def: 20.1%





Bliss

2021 – 2022 MPIC Storage Performance 3.14.22





Bliss

Processing Performance, Line Run, POP Evaluation

Herr Quality Foods

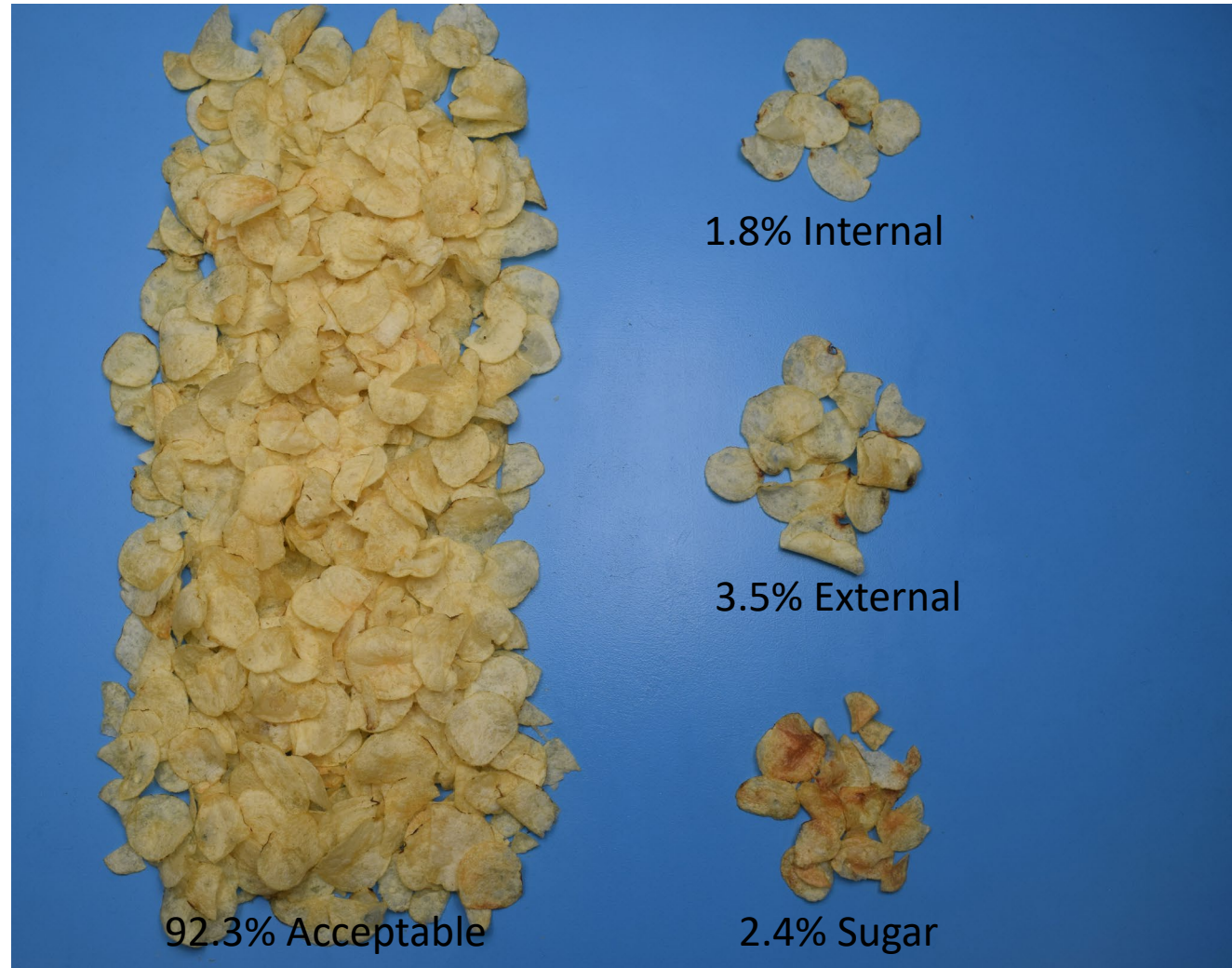
Processing Date: 3.15.22

SG: 1.086

Total Defects: 7.7%

Acceptable: 92.3%

Storage Pulp Temp: 44.8 °F





Bliss (NY163)

2023-2024 PUSA NexGen, MPIC Bulk Bin #8

Sandyland Farm, BSB Free: 52.0%, B/T: 0.7

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 10.23.23

Storage Temp. 53.6 °F

SFA Color: 1.0

Sucrose: 0.664 mg/g

Glucose: 0.020 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 6.3%

Green: 3.1%

Tot. Def: 9.4%





Bliss (NY163)

2023-2024 PUSA NexGen, MPIC Bulk Bin #8
Sandyland Farm, BSB Free: 52.0%, B/T: 0.7

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 11.20.23

Storage Temp. 50.4 °F

SFA Color: 1.0

Sucrose: 0.619 mg/g

Glucose: 0.040 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 6.2%

Green: 0.0%

Tot. Def: 6.3%





Bliss (NY163)

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 12.18.23

Storage Temp. 48.2 °F

SFA Color: 1.0

Sucrose: 0.462 mg/g

Glucose: 0.020 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 3.1%

Green: 0.0%

Tot. Def: 3.1%

2023-2024 PUSA NexGen, MPIC Bulk Bin #8

Sandyland Farm, BSB Free: 52.0%, B/T: 0.7





Bliss (NY163)

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 1.22.24

Storage Temp. 48.2 °F

SFA Color: 1.0

Sucrose: 0.492 mg/g

Glucose: 0.020 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 7.4%

Green: 8.8%

Tot. Def: 16.3%

2023-2024 PUSA NexGen, MPIC Bulk Bin #8

Sandyland Farm, BSB Free: 52.0%, B/T: 0.7





Bliss (NY163)

2023-2024 PUSA NexGen, MPIC Bulk Bin #9
Sandyland Farm, BSB Free: 55.0%, B/T: 0.7

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 10.23.23

Storage Temp. 53.0 °F

SFA Color: 1.0

Sucrose: 0.656 mg/g

Glucose: 0.010 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 7.0%

Green: 0.0%

Tot. Def: 7.0%





Bliss (NY163)

2023-2024 PUSA NexGen, MPIC Bulk Bin #9
Sandyland Farm, BSB Free: 55.0%, B/T: 0.7

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 11.6.23

Storage Temp. 51.8 °F

SFA Color: 1.0

Sucrose: 0.454 mg/g

Glucose: 0.020 mg/g

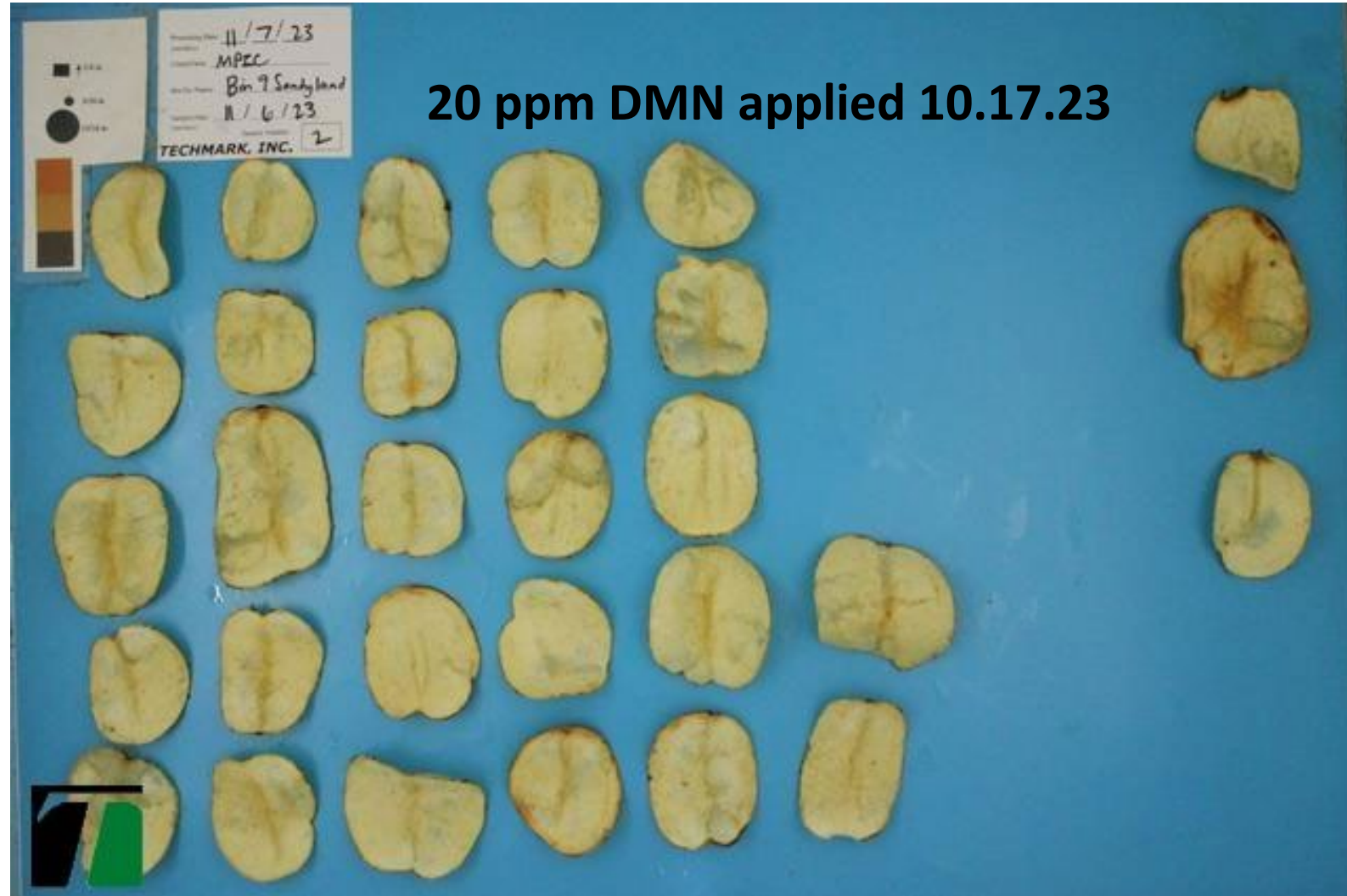
Undes: 0.0%

Intrn: 0.0%

Extrn: 10.9%

Green: 0.0%

Tot. Def: 10.9%





Bliss (NY163)

2023-2024 PUSA NexGen, MPIC Bulk Bin #9
Sandyland Farm, BSB Free: 55.0%, B/T: 0.7

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 11.20.23

Storage Temp. 51.8 °F

SFA Color: 1.0

Sucrose: 0.628 mg/g

Glucose: 0.030 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 0.0%

Green: 0.0%

Tot. Def: 0.0%





Bliss (NY163)

2023-2024 PUSA NexGen, MPIC Bulk Bin #9
Sandyland Farm, BSB Free: 55.0%, B/T: 0.7

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 12.18.23

Storage Temp. 48.2 °F

SFA Color: 1.0

Sucrose: 0.512 mg/g

Glucose: 0.030 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 6.6%

Green: 0.0%

Tot. Def: 6.6%





Bliss (NY163)

2023-2024 PUSA NexGen, MPIC Bulk Bin #9
Sandyland Farm, BSB Free: 55.0%, B/T: 0.7

Planted: 5.11.23

Vine Kill: 9.4.23

Harvested: 10.12.23

GDD40: 2999

Sample Date: 1.22.24

Storage Temp. 48.0 °F

SFA Color: 1.0

Sucrose: 0.501 mg/g

Glucose: 0.020 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 2.7%

Green: 0.0%

Tot. Def: 2.7%





2023-2024 Bliss Storage Plan

- **Does the application of 20 ppm DMN to bin #9 five days after bin loading effect the following:**
 - **reduce cellular respiration**
 - **increase periderm thickness**
 - **reduce tuber water loss**
 - **reduce pathogen development**
 - **impact chip color when compared to bin #8 (CIPC only)**
- **Target storage temperature of 48.0 °F for both bulk bins.**



2024 PUSA NexGen Plan for Bliss

2023 Fast-Track Seed Available: 435 cwt.

Variety	State	Grower	CWT	Storage Location	Processor
Bliss	MI	Lennard Ag. (Southern MI, Late Planted) (5.1.2024)	100	MPIC	UTZ, PA
Bliss	MI	Sandyland (Central MI, Early Planted) (5.1.2024)	100	MPIC	UTZ, PA
Bliss	MI	Sandyland (Central MI, Late Planted) (6.1.2024)	100	MPIC	UTZ, PA
Bliss	WI	Heartland	135	HARC	Campbell's, WI



2023 Box Bin Trial “Varieties” on the Horizon

- Bliss
- Mackinaw
- Snowden
- MSBB058-1
- MSDD247-11





Bliss (NY163)

2023-2024 MRC Box Bin, MPIC Bin #7

Planted: 5.9.23

Vine Kill: 9.10.23

Harvested: 9.27.23

GDD40: 3191 (3349 5yr)

Sample Date: 10.9.23

Storage Temp. 54.6 °F

SFA Color: 1.0

Sucrose: 0.553 mg/g

Glucose: 0.000 mg/g

Undes: 0.0%

Intrn: 3.5%

Extrn: 2.6%

Green: 0.0%

Tot. Def: 6.1%





Mackinaw

Planted: 5.9.23

Vine Kill: 9.10.23

Harvested: 9.27.23

GDD40: 3191 (3349 5yr)

Sample Date: 10.9.23

Storage Temp. 54.6 °F

SFA Color: 1.0

Sucrose: 1.163 mg/g

Glucose: 0.010 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 15.4%

Green: 0.0%

Tot. Def: 15.4%

2023-2024 MRC Box Bin, MPIC Bin #7





Snowden

Planted: 5.9.23

Vine Kill: 9.10.23

Harvested: 9.27.23

GDD40: 3191 (3349 5yr)

Sample Date: 10.9.23

Storage Temp. 54.6 °F

SFA Color: 1.0

Sucrose: 0.692 mg/g

Glucose: 0.020 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 46.8%

Green: 0.0%

Tot. Def: 46.8%

2023-2024 MRC Box Bin, MPIC Bin #7





MSBB058-1

2023-2024 MRC Box Bin, MPIC Bin #7

Planted: 5.9.23

Vine Kill: 9.10.23

Harvested: 9.27.23

GDD40: 3191 (3349 5yr)

Sample Date: 10.9.23

Storage Temp. 54.6 °F

SFA Color: 1.0

Sucrose: 0.753 mg/g

Glucose: 0.030 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 3.4%

Green: 0.0%

Tot. Def: 3.4%





MSBB058-1

2023-2024 MRC Box Bin, MPIC Bin #7

Planted: 5.9.23

Vine Kill: 9.10.23

Harvested: 9.27.23

GDD40: 3191 (3349 5yr)

Sample Date: 1.8.24

Storage Temp. 53.8 °F

SFA Color: 1.0

Sucrose: 0.267 mg/g

Glucose: 0.020 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 0.0%

Green: 0.0%

Tot. Def: 0.0%





MSBB058-1

MSU POP Trials
Medius.re Data;
Compare

2019, 2022-2023

3-year averages

Correlated data

9 trial records

		Lamoka	Snowden	Mackinaw	MSBB058-1
Trial					
Variety Records		9	9	9	9
Research					
Yield No1	cwt/a	371	483	448	412
Yield Total	cwt/a	418	543	505	462
% No1	%	87.2%	87.5%	89.0%	88.7%
Size Small	%	10.2%	11.1%	8.0%	8.2%
Size Mid	%	87.1%	87.4%	88.3%	87.9%
Size Large	%	0.1%	0.1%	0.7%	0.8%
% Culls	%	2.6%	1.4%	3.0%	3.1%
Specific Gravity	1.###	1.083	1.085	1.087	1.090
SFA Chip Color		1.2	1.0	1.2	1.1
Hollow Heart	%	2.2%	9.6%	2.2%	2.2%
Vascular Discoloration	%	13.3%	12.5%	13.7%	8.4%
Internal Brown Spots	%	5.2%	2.5%	4.4%	2.2%
Brown Center	%	0.0%	0.0%	0.0%	0.0%
Common Scab Rating		1.1	1.7	0.8	0.9
Stem End Defect		0.6	0.5	0.6	0.3
Plant Vigor		3.6	3.7	3.3	3.0
Vine Maturity		2.5	2.7	2.9	2.6
Storage					
Specific Gravity		1.087	1.081	1.094	1.099
SNaC Color		1.0	1.3	1.1	1.3
Defects Total	%	2.7%	7.1%	3.3%	2.5%



MSDD247-11 2023-2024 MRC Box Bin, MPIC Bin #7

Planted: 5.9.23

Vine Kill: 9.10.23

Harvested: 9.27.23

GDD40: 3191 (3349 5yr)

Sample Date: 10.9.23

Storage Temp. 54.6 °F

SFA Color: 1.0

Sucrose: 0.729 mg/g

Glucose: 0.020 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 2.3%

Green: 0.0%

Tot. Def: 2.3%





MSDD247-11 2023-2024 MRC Box Bin, MPIC Bin #7

Planted: 5.9.23

Vine Kill: 9.10.23

Harvested: 9.27.23

GDD40: 3191 (3349 5yr)

Sample Date: 1.22.24

Storage Temp. 53.8 °F

SFA Color: 1.0

Sucrose: 0.813 mg/g

Glucose: 0.020 mg/g

Undes: 0.0%

Intrn: 0.0%

Extrn: 0.0%

Green: 0.0%

Tot. Def: 0.0%





MSDD247-11
MSU POP Trials
Medius.re Data;
Compare
2021, 2023
2-year averages

Correlated data
5 trial records

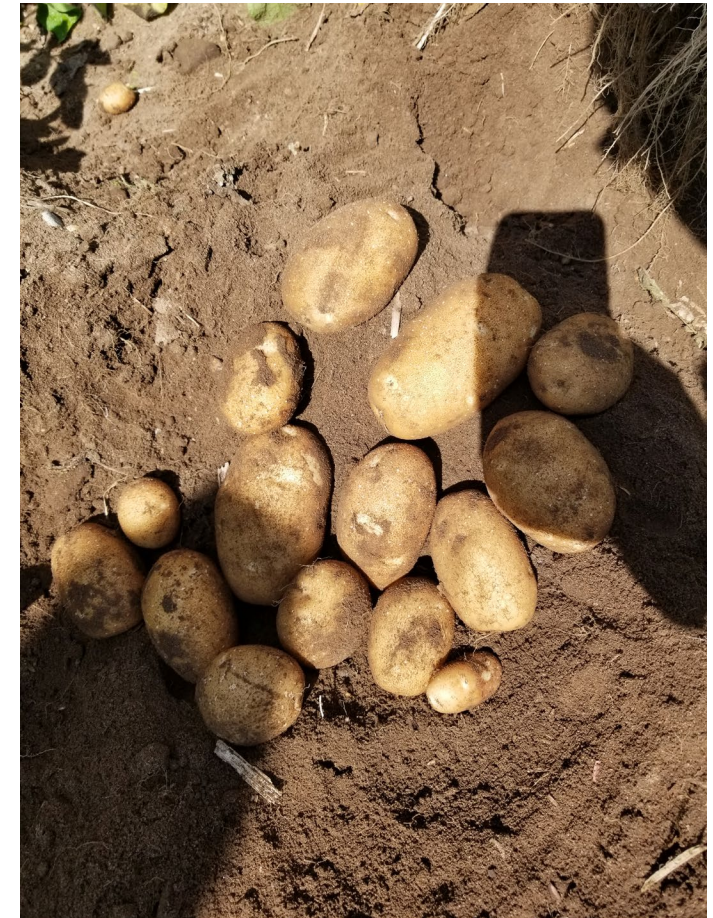
		Lamoka	Snowden	Mackinaw	MSDD247-11
Trial					
Variety Records		5	5	5	5
Research					
Yield No1	cwt/a	489	549	545	488
Yield Total	cwt/a	529	596	579	533
% No1	%	92.0%	91.0%	93.8%	91.0%
Size Small	%	5.3%	8.0%	5.5%	7.2%
Size Mid	%	92.0%	90.5%	92.8%	91.0%
Size Large	%	0.0%	0.5%	1.0%	0.0%
% Culls	%	2.8%	1.0%	0.8%	1.8%
Specific Gravity	1.###	1.080	1.083	1.085	1.087
SFA Chip Color		1.0	1.1	1.0	1.0
Hollow Heart	%	2.5%	15.0%	5.0%	3.3%
Vascular Discoloration	%	16.8%	8.2%	8.3%	2.5%
Internal Brown Spots	%	7.5%	2.5%	7.5%	3.3%
Brown Center	%	0.0%	0.0%	0.0%	2.5%
Common Scab Rating		0.8	1.4	0.6	0.4
Stem End Defect		0.3	0.2	0.3	0.0
Plant Vigor		4.4	4.2	4.1	4.3
Vine Maturity		2.8	3.3	3.3	3.0



Russet Overview

(Common Scab Tolerant, Blocky Tuber Type, less HH than RN, Higher SG)

- **A12327-5VR** – High yield, blocky, SL HH, 1.075 SG
- **Portage (W13A11229-1Rus)** – Uniform type, high SG, above average HH
- **A08433-4STO** – High yielding, blocky, not as uniform, med.-high SG, HH=RN
- **AF5707-1** – High yielding, blocky, uniform, med.-high SG, HH=RN



A08433-4STO, Walther's Newberry



A12327-5VR

High Yield, Scab and PVY Tolerant, Heavy Skin (A06862-11VR X La Belle Russet)

**A12327-5VR:
2023 Jenkin's**



**Silverton Russet:
2023 Jenkin's**



**A12327-5VR:
2023 4-L Farms.**



**Silverton Russet:
2023 4-L Farms**





MSU POP Trials Medius.re Data; Compare

- 2020-2023
- 4-year averages
- variable trial records

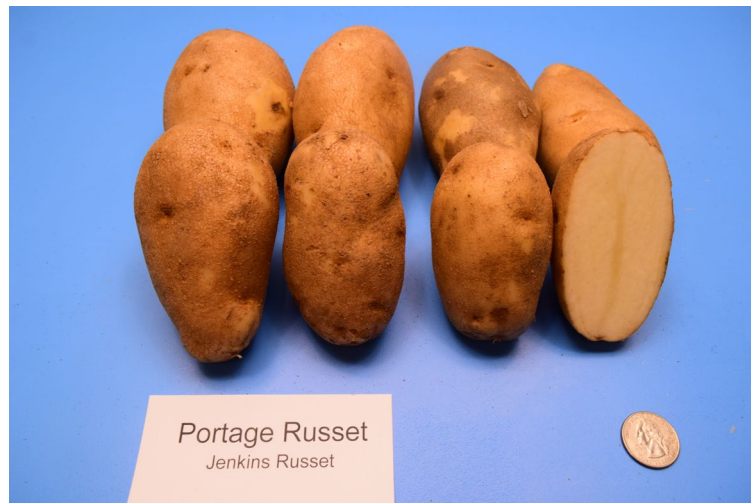
		Goldrush	Russet Norkotah	Silverton Russet	A12327-5VR
Trial					
Variety Records		22	28	28	14
Research					
Yield No1	cwt/a	323	347	428	589
Yield Total	cwt/a	479	460	509	679
% No1	%	68.9%	73.6%	82.5%	87.6%
Size Small	%	17.7%	17.3%	11.2%	5.2%
Size Mid	%	61.3%	61.1%	65.9%	46.6%
Size Large	%	7.8%	12.5%	16.5%	41.0%
% Culls	%	13.4%	9.1%	6.3%	7.2%
Specific Gravity	1.###	1.068	1.071	1.069	1.076
Hollow Heart	%	4.3%	18.0%	7.9%	10.3%
Vascular Discoloration	%	4.8%	3.3%	6.3%	6.9%
Internal Brown Spots	%	1.0%	0.4%	3.6%	3.8%
Brown Center	%	0.5%	0.4%	3.6%	0.0%
Common Scab Rating		0.1	0.5	0.4	0.2
Vine Maturity		2.7	2.8	3.2	3.2
Length: Width		1.9	1.7	1.7	1.6



W13A11229-1Rus (Portage Russet)

Dual Purpose, High SG and Yield, Flat Blocky Oblong Tuber Type (A01325-1 X A06131-19)

**Portage Russet:
2023 Jenkin's**



**Silverton Russet:
2023 Jenkin's**



**Portage Russet:
2023 4-L Farms**



**Silverton Russet:
2023 4-L Farms**





MSU POP Trials Medius.re Data; Compare

- 2018, 2020-2023
- 5-year averages
- variable trial records

		Goldrush	Russet Norkotah	Silverton Russet	Portage Russet
Trial					
Variety Records		28	42	43	24
Research					
Yield No1	cwt/a	312	382	433	444
Yield Total	cwt/a	461	496	521	564
% No1	%	68.7%	75.3%	82.0%	77.5%
Size Small	%	18.7%	15.6%	11.1%	18.6%
Size Mid	%	62.2%	64.1%	68.4%	71.8%
Size Large	%	6.7%	11.2%	13.6%	5.7%
% Culls	%	12.6%	9.1%	6.9%	3.9%
Specific Gravity	1.###	1.069	1.071	1.069	1.083
Hollow Heart	%	5.6%	24.9%	9.7%	16.1%
Vascular Discoloration	%	5.6%	8.0%	7.0%	5.2%
Internal Brown Spots	%	0.7%	0.5%	4.8%	0.0%
Brown Center	%	0.4%	0.8%	2.6%	0.1%
Common Scab Rating		0.0	0.4	0.3	0.6
Vine Maturity		2.6	2.8	3.3	2.9
Length: Width		1.9	1.7	1.7	1.9



A08433-4STO

Flat Block Tuber Type, Full Season (A01667-3 X Dakota Trailblazer)

**A08433-4STO:
2023 Jenkin's**



**Silverton Russet:
2023 Jenkin's**



**A08433-4STO:
2023 4-L Farms**



**Silverton Russet:
2023 4-L Farms**





MSU POP Trials Medius.re Data; Compare

- 2016-2023
- 8-year averages
- variable trial records

		Goldrush	Russet Norkotah	Silverton Russet	A08433-4sto
Trial					
Variety Records		28	42	43	40
Research					
Yield No1	cwt/a	312	382	433	487
Yield Total	cwt/a	461	496	521	603
% No1	%	68.7%	75.3%	82.0%	80.0%
Size Small	%	18.7%	15.6%	11.1%	12.6%
Size Mid	%	62.2%	64.1%	68.4%	67.0%
Size Large	%	6.7%	11.2%	13.6%	13.0%
% Culls	%	12.6%	9.1%	6.9%	7.4%
Specific Gravity	1.###	1.069	1.071	1.069	1.077
Hollow Heart	%	5.6%	24.9%	9.7%	13.6%
Vascular Discoloration	%	5.6%	8.0%	7.0%	4.3%
Internal Brown Spots	%	0.7%	0.5%	4.8%	0.3%
Brown Center	%	0.4%	0.8%	2.6%	0.2%
Common Scab Rating		0.0	0.4	0.3	0.5
Vine Maturity		2.6	2.8	3.3	3.8
Length: Width		1.9	1.7	1.7	1.5



AF5707-1

Flat Block Tuber Type, Full Season (A93575-4 X Dakota Trailblazer)

**AF5707-1:
2022 Lennard's**



**Silverton Russet:
2022 Lennard's**



**AF5707-1:
2022 Walther's**



**Silverton Russet:
2022 Walther's**





MSU POP Trials Medius.re Data; Compare

- 2021-2022
- 2-year averages
- Variable trial records

		Goldrush	Russet Norkotah	Silverton Russet	AF5707-1
Trial					
Variety Records		14	18	18	9
Research					
Yield No1	cwt/a	316	345	447	534
Yield Total	cwt/a	463	467	519	668
% No1	%	67.2%	71.7%	85.4%	79.1%
Size Small	%	18.6%	19.4%	10.0%	17.2%
Size Mid	%	58.8%	58.2%	64.3%	72.9%
Size Large	%	8.8%	13.4%	20.9%	6.1%
% Culls	%	14.2%	9.0%	4.6%	3.7%
Specific Gravity	1.###	1.068	1.072	1.069	1.079
Hollow Heart	%	3.6%	17.4%	6.7%	11.1%
Vascular Discoloration	%	5.7%	3.2%	5.6%	1.1%
Internal Brown Spots	%	0.0%	0.0%	4.1%	0.0%
Brown Center	%	0.0%	0.6%	2.8%	0.0%
Common Scab Rating		0.0	0.3	0.3	1.3



AF5707-1

Flat Block Tuber Type, Full Season (A93575-4 X Dakota Trailblazer)



**AF5707-1:
2020 Walther's
NFPT Trial**

- No PVY resistance
- No scab resistance
- 4000 mini tubers @ MSU



Yellow Flesh Overview

(Common Scab tolerant, Smooth Skin Type)

- **Colomba (HZPC) - Very early harvest**
- **Constance (Parkland, AGRICO.) – Mid-season, PVY suc.**
- **MSGG039-11Y (MSU) - Mid-season harvest**
- **W13103-2Y (U. of Wis.) – Full season harvest**





Colomba, HZPC

Light Golden Skin and Flesh, Early Harvest (Carrera X Agata)

**Colomba:
2023 Styma**



**Jelly:
2023 Styma**



**Colomba:
2023 4-L Farms**



**Jelly:
2023 4-L Farms**





MSU POP Trials Medius.re Data; Compare

- 2020-2023
- 4-year averages
- variable trial records

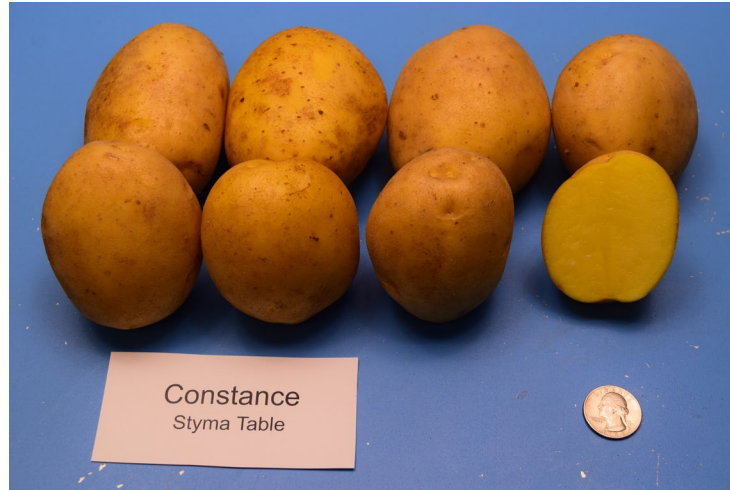
		Jelly	Queen Anne	Yukon Gold	Colomba
Trial					
Variety Records		15	24	20	24
Research					
Yield No1	cwt/a	455	336	376	557
Yield Total	cwt/a	522	509	422	624
% No1	%	85.5%	64.0%	88.7%	88.8%
Size Small	%	9.6%	33.0%	6.8%	9.0%
Size Mid	%	82.9%	63.7%	87.1%	86.2%
Size Large	%	2.6%	0.3%	1.6%	2.6%
% Culls	%	4.9%	3.0%	4.4%	2.3%
Specific Gravity	1.###	1.073	1.059	1.076	1.054
Hollow Heart	%	0.0%	0.0%	25.1%	0.0%
Vascular Discoloration	%	7.6%	1.5%	3.8%	5.1%
Internal Brown Spots	%	0.7%	0.0%	2.6%	0.8%
Brown Center	%	0.7%	0.0%	2.4%	0.0%
Common Scab Rating		0.5	0.9	1.2	0.6
Vine Maturity		3.7	2.7	2.3	2.1
Yellow Skin Waxiness		3.1	4.1	3.0	3.6



Constance, Parkland

Light Golden Skin, Golden Flesh, Med. Maturity (Marabel X AR93-1243)

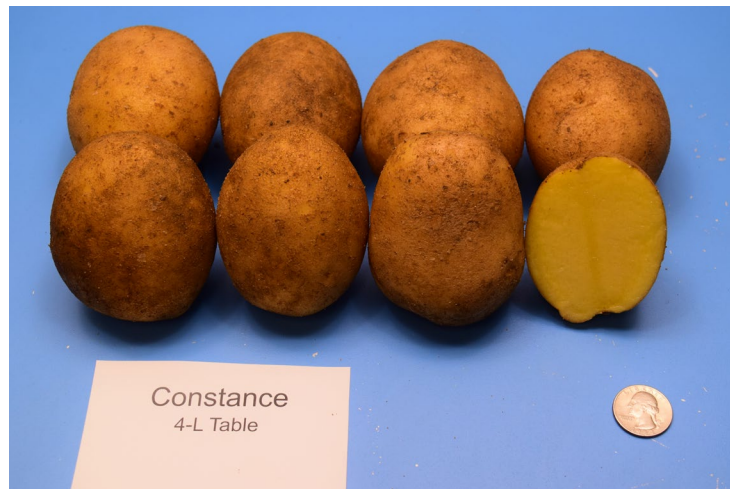
**Constance:
2023 Styma**



**Jelly:
2023 Styma**



**Constance:
2023 4-L Farms**



**Jelly:
2023 4-L Farms**





MSU POP Trials Medius.re Data; Compare

- 2020-2023
- 4-year averages
- variable trial records

		Jelly	Queen Anne	Yukon Gold	Constance
Trial					
Variety Records		15	24	20	24
Research					
Yield No1	cwt/a	455	336	376	416
Yield Total	cwt/a	522	509	422	527
% No1	%	85.5%	64.0%	88.7%	77.1%
Size Small	%	9.6%	33.0%	6.8%	19.4%
Size Mid	%	82.9%	63.7%	87.1%	75.6%
Size Large	%	2.6%	0.3%	1.6%	1.5%
% Culls	%	4.9%	3.0%	4.4%	3.5%
Specific Gravity	1.###	1.073	1.059	1.076	1.066
Hollow Heart	%	0.0%	0.0%	25.1%	0.0%
Vascular Discoloration	%	7.6%	1.5%	3.8%	1.1%
Internal Brown Spots	%	0.7%	0.0%	2.6%	2.6%
Brown Center	%	0.7%	0.0%	2.4%	0.0%
Common Scab Rating		0.5	0.9	1.2	0.9
Vine Maturity		3.7	2.7	2.3	2.7
Yellow Skin Waxiness		3.1	4.1	3.0	3.4
Yellow Skin Flesh Color		3.9	4.2	2.6	3.3
Length: Width		1.4	1.5	1.2	1.2



MSGG039-11Y, MSU

Light Skin, Yellow Flesh, Medium Maturity (Soraya X MSBB719-01)

**MSGG039-11Y:
2023 Styma**



**Jelly:
2023 Styma**



**MSGG039-11Y:
2023 4-L Farms**



**Jelly:
2023 4-L Farms**





MSU POP Trials Medius.re Data; Compare

- 2023
- 1-year averages
- Correlated
trial records

		Jelly	Queen Anne	Yukon Gold	MSGG039-11Y
Trial					
Variety Records		6	6	6	6
Research					
Yield No1	cwt/a	510	399	348	582
Yield Total	cwt/a	590	591	390	662
% No1	%	84.3%	66.7%	88.0%	87.5%
Size Small	%	11.3%	29.3%	10.3%	7.5%
Size Mid	%	83.8%	66.7%	86.8%	86.7%
Size Large	%	0.5%	0.0%	1.2%	0.8%
% Culls	%	4.3%	4.0%	1.7%	5.0%
Specific Gravity	1.###	1.069	1.062	1.072	1.071
Hollow Heart	%	0.0%	0.0%	19.3%	0.0%
Vascular Discoloration	%	3.3%	0.0%	6.7%	0.0%
Internal Brown Spots	%	1.7%	0.0%	3.3%	0.0%
Brown Center	%	0.0%	0.0%	5.0%	5.0%
Common Scab Rating		0.5	0.8	0.8	0.3
Vine Maturity		3.6	2.9	2.7	2.9
Yellow Skin Waxiness		3.4	3.8	3.0	3.7
Yellow Skin Flesh Color		4.0	4.0	2.9	2.8



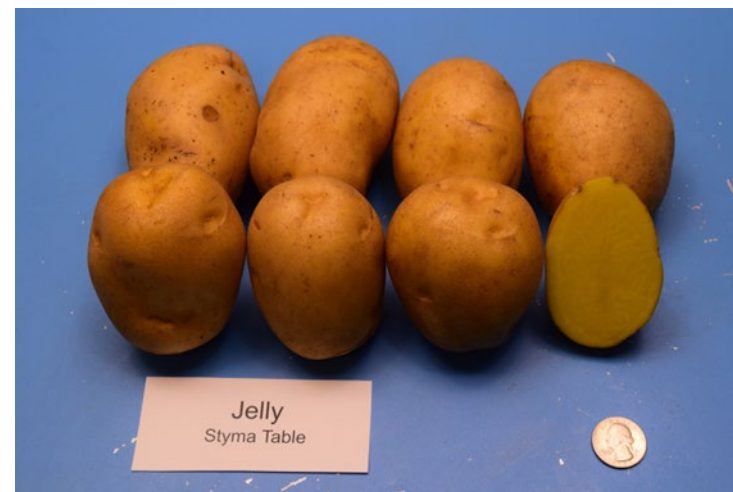
W13103-2Y, Univ. of Wisconsin

Golden Skin and Flesh, Full Season Harvest, Early to Medium Dormancy (Soraya X W9576-4Y)

**W13103-2Y:
2023 Styma**



**Jelly:
2023 Styma**



**W13103-2Y:
2023 4-L Farms**



**Jelly:
2023 4-L Farms**





MSU POP Trials Medius.re Data; Compare

- 2022-2023
- 2-year averages
- variable trial records

		Jelly	Queen Anne	Yukon Gold	W13103-2Y
Trial					
Variety Records		15	13	9	14
Research					
Yield No1	cwt/a	455	339	354	472
Yield Total	cwt/a	522	510	391	525
% No1	%	85.5%	65.5%	89.8%	89.5%
Size Small	%	9.6%	30.1%	9.0%	9.5%
Size Mid	%	82.9%	65.5%	87.1%	87.3%
Size Large	%	2.6%	0.1%	2.7%	2.2%
% Culls	%	4.9%	4.4%	1.2%	1.0%
Specific Gravity	1.###	1.073	1.061	1.074	1.061
Hollow Heart	%	0.0%	0.0%	14.0%	0.0%
Vascular Discoloration	%	7.6%	1.3%	7.8%	3.6%
Internal Brown Spots	%	0.7%	0.0%	2.2%	1.4%
Brown Center	%	0.7%	0.0%	3.3%	0.0%
Common Scab Rating		0.5	0.7	1.1	0.7
Vine Maturity		3.7	3.0	2.5	2.8
Yellow Skin Waxiness		3.1	4.0	3.2	3.4
Yellow Skin Flesh Color		3.9	4.4	2.8	3.9
Length: Width		1.4	1.7	1.4	1.1



Red Overview

- **NDAF113484B-1 Mid-season maturity, 2025 bulk plantings**



**NDAF113484B-1:
2023 Styma**



**Dark Red Norland:
2023 Styma**



MSU POP Trials Medius.re Data; Compare

- 2020-2023
- 4-year averages
- correlated trial records

Dark Red Norland		NDA050237B-1R	NDAF113484B-1
Trial			
Variety Records	16	16	16
Research			
Yield No1	cwt/a	345	418
Yield Total	cwt/a	411	496
% No1	%	84.8%	85.0%
Size Small	%	11.3%	14.9%
Size Mid	%	83.8%	82.0%
Size Large	%	0.1%	1.1%
% Culls	%	4.9%	2.0%
Specific Gravity	1.###	1.060	1.063
Hollow Heart	%	1.9%	0.6%
Vascular Discoloration	%	3.1%	9.4%
Internal Brown Spots	%	0.0%	1.3%
Brown Center	%	0.0%	0.6%
Common Scab Rating		0.3	0.5
Vine Maturity		1.7	3.9
Red Skin Waxiness		3.4	3.6
Red Skin Skin Color		3.3	4.3
Red Skin Uniformity		2.6	4.3
Red Skin Silver Scurf		3.0	2.1
Length: Width		1.1	1.0



Round White Overview

- **05.6556.1 (Norika Am.) - Early to mid-season harvest**
- **Noya (Solana) – Lite netted skin, medium early maturity, good dormancy**



05.6556.1, Norika America

Light Golden Skin and Flesh, Early Harvest (Carrera X Agata)

**05.6556.1:
2023 Horkey**



**Reba:
2023 Horkey**



**05.6556.1:
2023 4-L Farms**



**Reba:
2023 4-L Farms**

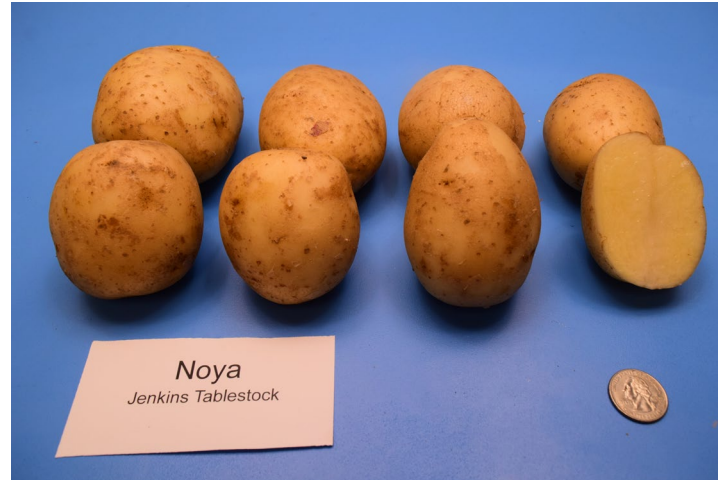




Noya, Solana

Netted Skin, Med. Early, Dormant (Laterra X Cyrano)

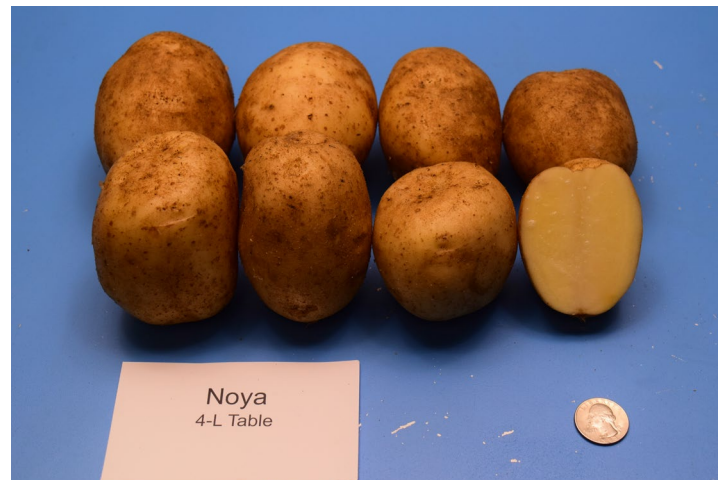
Noya:
2023 Jenkin's



Reba:
2023 Jenkin's



Noya:
2023 4-L Farms



Reba:
2023 4-L Farms





MSU POP Trials Medius.re Data; Compare

- 3 trial locations
- 1-year average
- Correlated data

		Reba	05 6556.1	Noya
Trial				
Variety Records		4	4	4
Research				
Yield No1	cwt/a	409	577	476
Yield Total	cwt/a	436	672	554
% No1	%	93.8%	85.3%	86.0%
Size Small	%	4.0%	11.0%	11.3%
Size Mid	%	92.0%	85.3%	86.0%
Size Large	%	1.8%	0.0%	0.0%
% Culls	%	2.3%	3.8%	2.7%
Specific Gravity	1.###	1.063	1.049	1.074
Hollow Heart	%	15.0%	0.0%	0.0%
Vascular Discoloration	%	0.0%	0.8%	0.0%
Internal Brown Spots	%	0.0%	0.0%	0.0%
Brown Center	%	2.5%	0.0%	10.0%
Common Scab Rating		0.6	0.8	0.6
Vine Maturity		3.1	2.9	3.6
Yellow Skin Waxiness		3.0	3.9	3.6



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