



# Seedless table grape production

Amaya Atucha  
UW-Madison Division of Extension



# Background

- Most of Wisconsin grape production is for wine.
- Some older seeded table grapes (Fredonia, Bluebell, King of the North, Kay Gray, Swenson Red) can survive winter in WI.
- New seedless table grapes with improved cold hardiness from UMN grape breeding program.







# Background

- Table grape cultivars trial in WMARS and PARS
- 12 cultivars planted in 2007
- 4 additional cultivars in 2011



Survived to 2017	Cultivar	Color	Pedigree	Release/Introduction	Institution/Breeder	Year Established WMARS	Year Established PARS
Yes	Einset	Red	'Fredonia' x 'Canner' includes V. vinifera and V. labrusca	1985	Cornell University	2007	2008 & 2009
Yes	Reliance	Red	'Ontario' x 'Suffolk Red' includes V. labrusca and V. vinifera	1983	University of Arkansas	2007	2008 & 2009
Yes	Somerset Seedless	Red	'E.S. 5-3-64' x 'Petit Jewel' includes V. labrusca, v. riparia, V. vinifera, et al American Vitis spp	2002	Elmer Swenson	2007	2008
Yes	Mars	Blue	'Island Belle' x 'Arkansas 1339' includes V labrusca and V. vinifera	1984	University of Arkansas	2007	2008 & 2009
Yes	Trollhaugen	Blue	'MN 78' x 'Venus' includes V. labrusca and V. riparia	2000	Elmer Swenson	2007	2012
Yes	Montreal Blue	Blue	'Kandiyohi' x 'E.S. 24-52' includes V. riparia, V. labrusca, V. vinifera; synonym ES 6-4-47	unknown	Elmer Swenson	2011	---
Yes	Himrod	Green	'Ontaria' x 'Thompson' includes V. labrusca and V. vinifera	1952	Cornell University	2007	2011
No	Canadice	Red	'Bath' x 'Himrod' includes V. labrusca and V. vinifera	1962	Cornell University	2007	2011
No	Vanessa	Red	'Seneca' x 'New York 45910' includes V. labrusca and V. vinifera	1983	Horticultural Research Institute of Canada	2007	2011
No	Suffolk Red	Red	'Fredonia' x 'Russian Seedless' includes V. labrusca and V. vinifera	1972	Cornell University	2011	---
No	Venus	Blue	'Alden' x 'NY4000' includes V. labrusca and V. vinifera	1978	University of Arkansas	2007	---
No	Jupiter	Blue	'Arkansas selection 1258' x 'Arkansas Selection 1762' includes V. labrusca and V. vinifera	1998	University of Arkansas	2011	---
No	Thomcord	Blue	'Thompson Seedless' x 'Concord' includes V. labrusca and V. vinifera	2003	San Joaquin Valley Ag Sciences Center Parlier, CA	2011	---
No	Interlaken	Green	'Ontaria' x 'Thompson' includes V. labrusca and V. vinifera	before 1968	Cornell University	2007	---
No	Lakemont	Green	'Ontaria' x 'Thompson' includes V. labrusca and V. vinifera	1972	Cornell University	2007	---
No	Marquis	Green	'Athens' x 'Emerald Seedless' includes V. labrusca and V. vinifera	1996	Cornell University	2007	2008 & 2009





# What did we learn from this initial trial?

- Cold hardiness
- Training systems
- Disease susceptibility
- Consumer survey







United States Department of  
Agriculture  
National Institute of Food and Agriculture

## New cultivar trial

- Selected best cultivars from previous study: Mars, Reliance, Somerset Seedless, Montreal Blue.
- Included 3 selections from UMN breeding program: MN1325, MN 1369, MN 1296.
- Trained in High Cordon system.
- Added 5 more locations in WI: Bayfield, Richland Center, Chippewa, Sturgeon Bay, Spooner.
- At the WMARS we established the new trial in 2018-2019 which include: Mars, Reliance, Somerset Seedless, MN1325, MN 1369.
- All other locations were planted in 2022.

# UW Emerging Crops Accelerator

Seedless Table Grape Variety Trials

MN1325

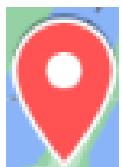
MN1296

MN1369

Reliance

Somerset Seedless

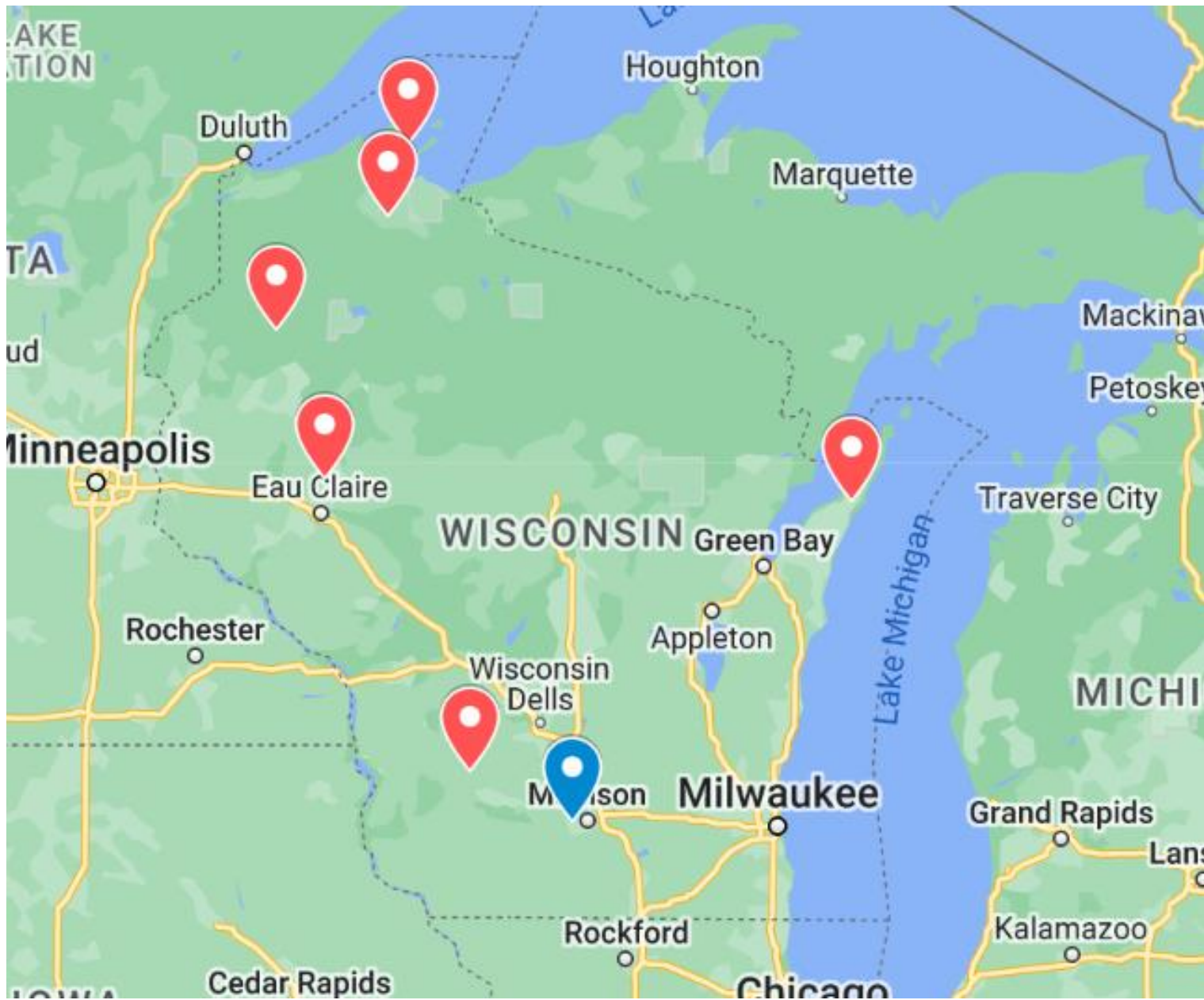
Mars



Established spring 2022



Established spring 2020

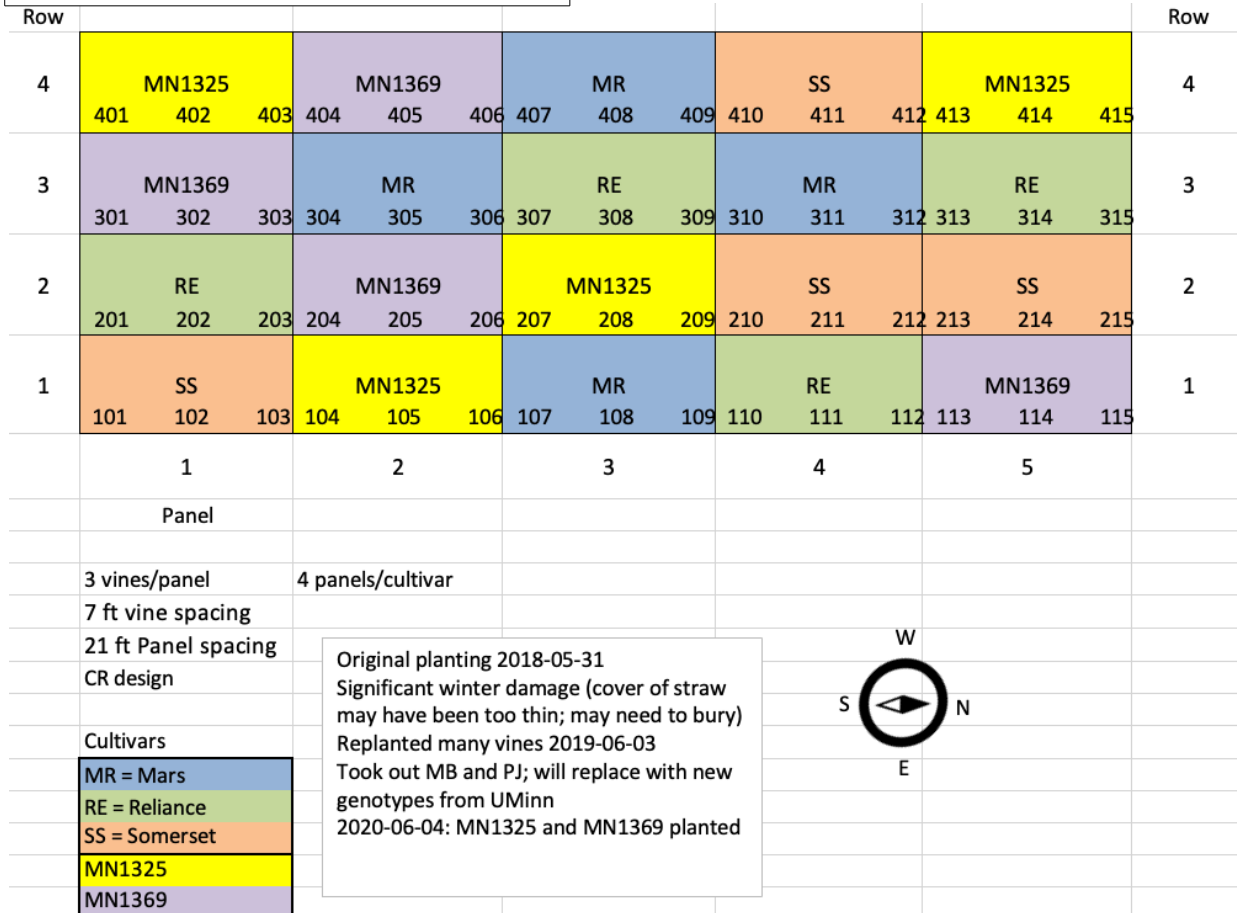








# Experimental set up at West Madison winery station



- Planted in May 2018.
- 10 x 7 ft (622 vines/ac).
- Significant cold damage during polar vortex 2019.
- Many vines had to be replanted.
- We replaced Petite Jewel and Montreal Blue with UMN selections.



# First Harvest

- 2022 we had our first harvest from cultivars planted in 2019.

<b>Cultivar</b>	<b># Clusters</b>	<b>Avg Cluster wgt (g)</b>	<b>Yield/vine (lb)</b>	<b>Yield lb/ac</b>
<b>MN1325</b>	10.2	103.9	1.8	1099
<b>MN1369</b>	16.6	155.7	4.2	2621
<b>Mars</b>	26.3	247.0	9.3	5772
<b>Reliance</b>	19.8	299.4	10.0	6236
<b>Somerset S.</b>	31.9	129.7	6.4	3950

<b>Cultivar</b>	<b>Brix</b>	<b>TA</b>
<b>MN1325</b>	20.1	18.2
<b>MN1369</b>	17.7	15.6
<b>Mars</b>	13.8	11.0
<b>Reliance</b>	18.0	8.4
<b>Somerset S.</b>	17.7	15.2



# First Harvest- what we learned

- Table grapes cultivars are ready for harvest much earlier than wine grapes.
- Harvest in mid-August. (Reliance, Sommerset S., MN1369, Mars, MN1325)
- Bird netting **is a must**.
- TA values ranges from 10-18 g/L
- Brix 14-20%
- Yields ~10 lb/vine





# 2023 Season

- It started great.....until we had the the end of Apr





# Harvest 2023



- Aug 22, but we could have started 2-3 weeks earlier.
- Great season with the dry weather.
- We set up the bird nets end of July.

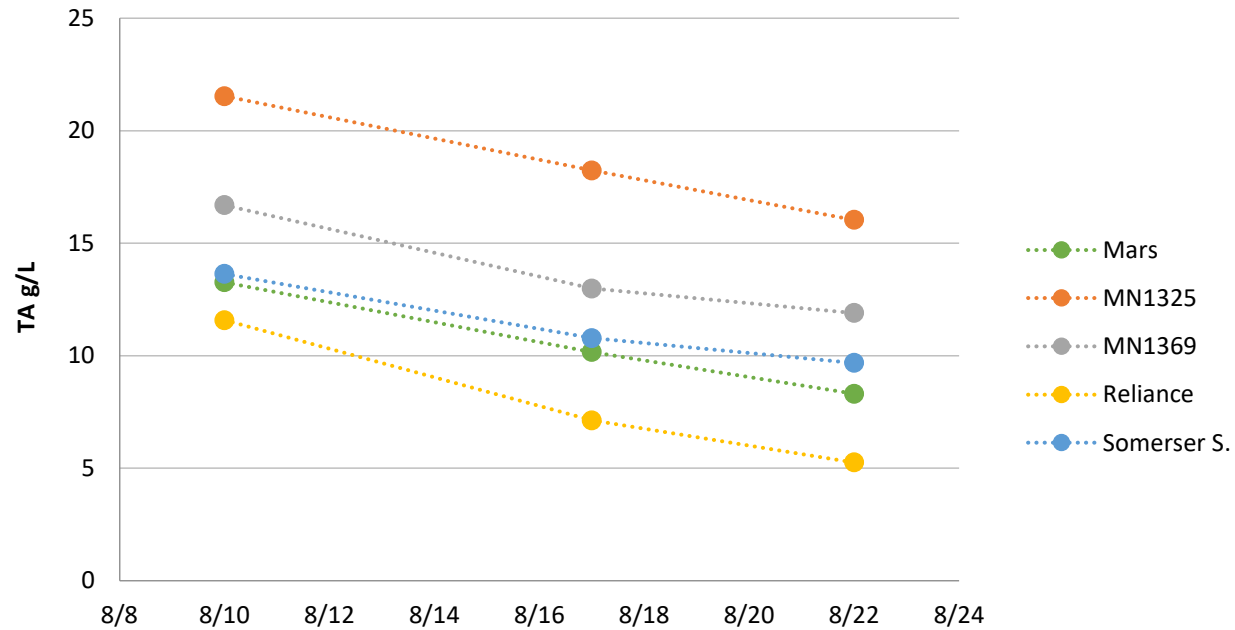
# Harvest 2023

<b>Cultivar</b>	<b>Avg # Clusters/vine</b>	<b>Avg Cluster wgt (g)</b>	<b>Avg berry wgt (g)</b>	<b>Total yield (lb)</b>	<b>Avg Yield/vine (lb)</b>	<b>Avg Yield lbs/a</b>
<b>MN1325</b>	71.6	133.3	1.6	192.2	17.5	10,852.6
<b>MN1369</b>	40.6	199.0	2.6	204.0	17.0	10,559.0
<b>MR</b>	68.0	299.4	3.7	278.0	27.8	17,267.1
<b>RE</b>	52.7	308.7	2.7	312.1	26.0	16,154.2
<b>SS</b>	91.1	170.2	1.9	333.1	27.8	17,241.2

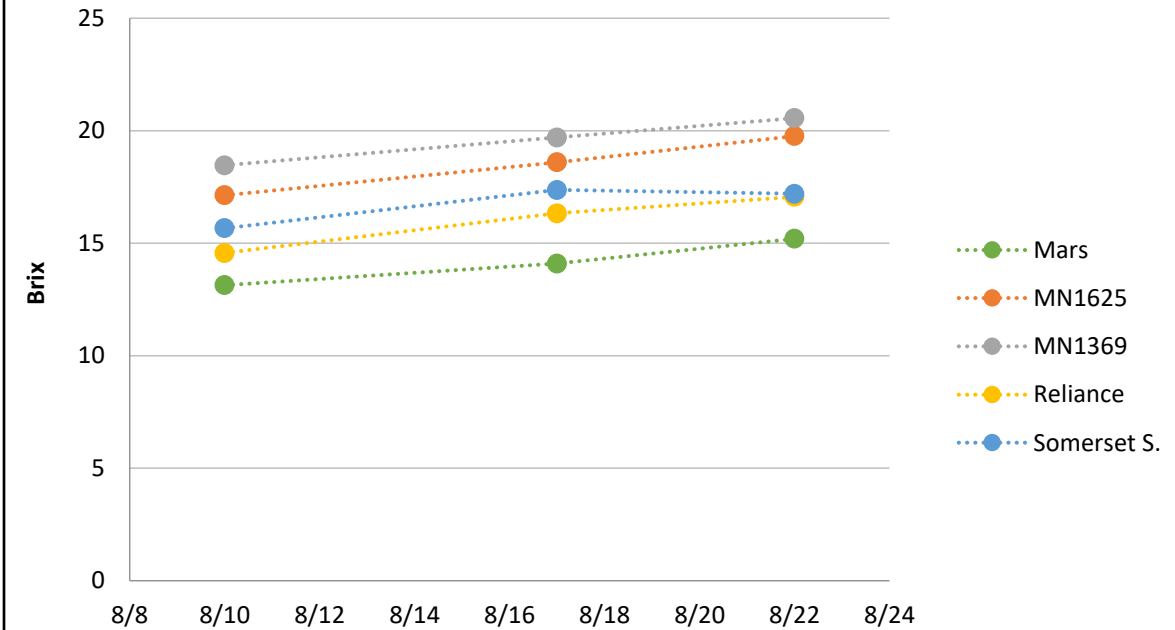


# Fruit quality

## Titratable Acidity (TA)



## Brix









Questions?