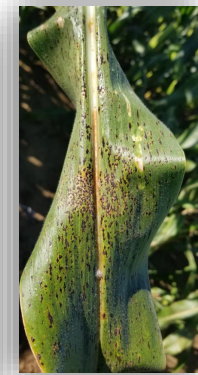


UPDATES IN DISEASE MANAGEMENT OF PROCESSING VEGETABLES

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Extension

University of Wisconsin-Madison



THE UNIVERSITY
of
WISCONSIN
MADISON



- February 2024 update to MWFPA



CARROT VARIETY RESPONSE TO FOLIAR DISEASE



Department of Plant Pathology
UNIVERSITY OF WISCONSIN-MADISON

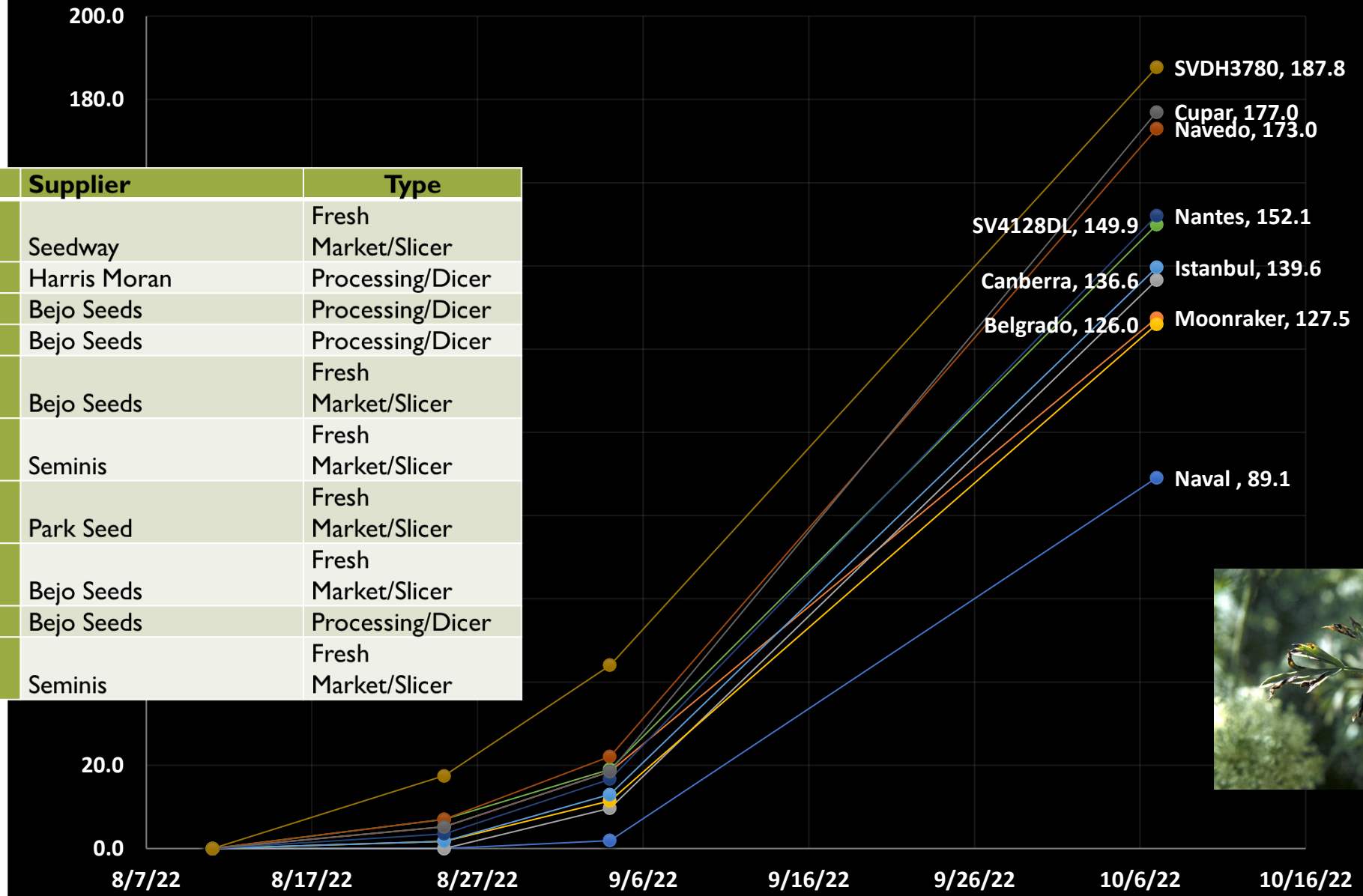
CARROT FOLIAR DISEASE

- Carrot leaf blights are caused by two fungal pathogens, *Alternaria dauci* and *Cercospora carotae*
- And one bacterial pathogen, *Xanthomonas campestris* pv. *carotae*
- Since any combination of the three pathogens may occur in a field, proper identification is important for employing the proper management strategies.



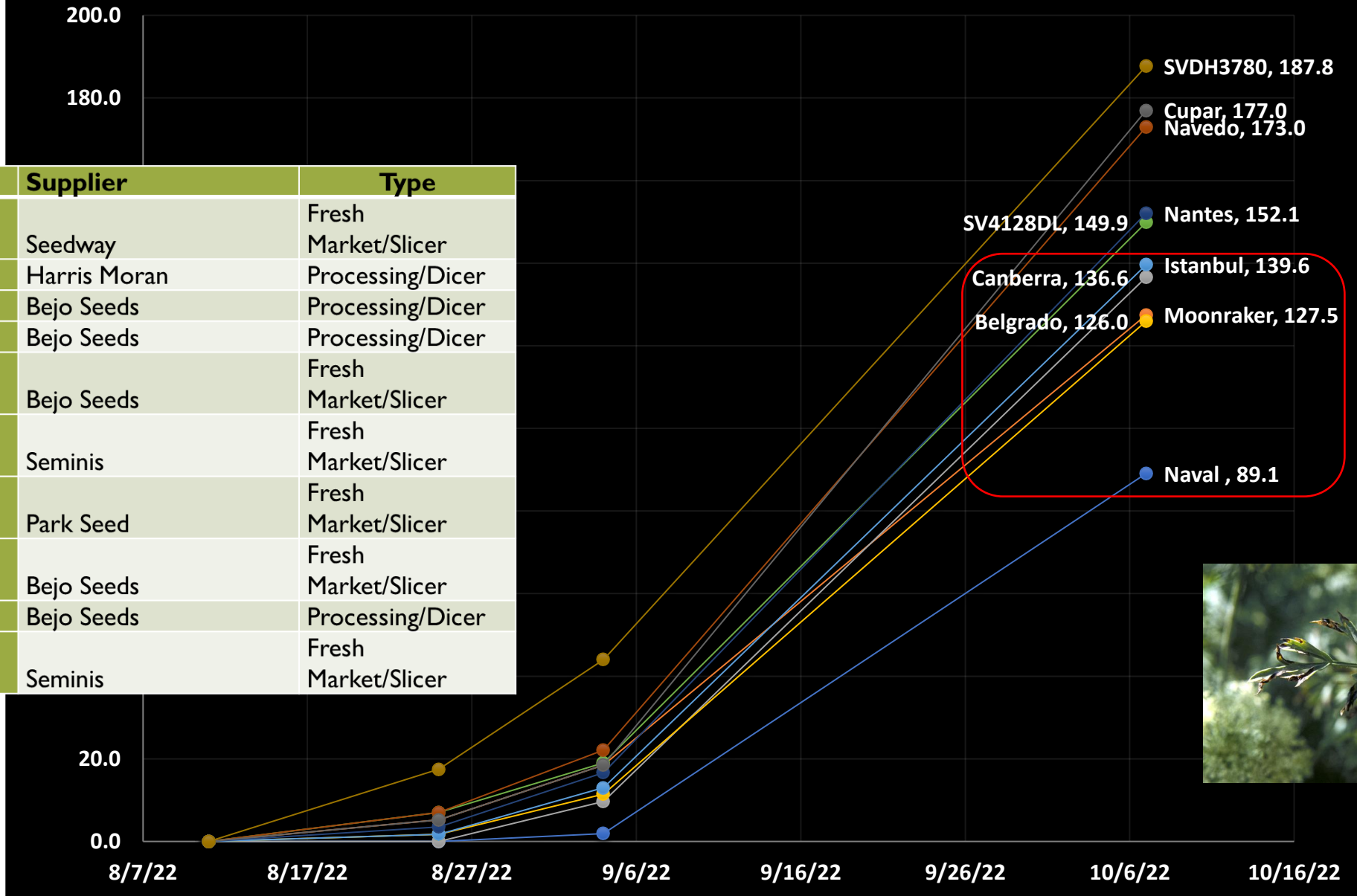
2022 – HARS - AUDPC over the Growing Season

Variety	Supplier	Type
Naval	Seedway	Fresh Market/Slicer
Moonraker	Harris Moran	Processing/Dicer
Canberra	Bejo Seeds	Processing/Dicer
Belgrado	Bejo Seeds	Processing/Dicer
Istanbul	Bejo Seeds	Fresh Market/Slicer
SV4128DL	Seminis	Fresh Market/Slicer
Nantes	Park Seed	Fresh Market/Slicer
Navedo	Bejo Seeds	Fresh Market/Slicer
Cupar	Bejo Seeds	Processing/Dicer
SVDH3780	Seminis	Fresh Market/Slicer



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SVDH3780	Seminis	Fresh Market/Slicer





CARROT FOLIAR DISEASE CULTIVAR EVALUATION 2023

- UW Hancock ARS
- Seed sown at 250,000 seed/A on May 16
 - Replant on June 13
- 4 replicates arranged in a RCBD
- Each replicate plot was 4.5 ft wide (bed) with 3, 18-ft long seeding rows
- 19 in between rows on bed with 17 in from row edge to bed edge
- Naturally occurring inoculum
- No fungicides & foliar fungicide program comparison
- Disease evaluations Jul-harvest



CARROT VARIETY EVALUATION 2023

Variety Name	Market Type
Caravel*	Fresh Market/Slicer
SV4128DL	Fresh Market/ Slicer
Moonraker	Processing/Dicer
Naval	Fresh Market/Slicer
Nantes	Fresh Market/Slicer
Belgrado	Processing/Dicer
Canberra	Processing/Dicer
Navedo	Fresh Market/Slicer
Istanbul	Fresh Market/Slicer
Cupar	Processing/Dicer

- 4 treatments initiated at first symptom of foliar disease (Aug 2, Aug 16, Aug 30, Sep 13)
- Foliar Fungicide Program
- 1) Kocide 3000 1.5 lb + Bravo WeatherStik 1.5 pt (Aug 2 & Aug 16)
- 2) Merivon (fluxapyroxad + pyraclostrobin) 5.5 fl oz + Bravo WeatherStik 1.5 pt (Aug 29 & Sep 13)

*new in 2023

SVDH3780 not included in 2023



CARROT VARIETY EVALUATION 2023

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Cupar	Processing/Dicer

- Foliar disease evaluated on Aug 3, Sep 9, Oct 5 (0-11 Horsfall Barratt)
- AUDPC determined by trapezoidal integration and then converted into Relative AUDPC
- Percentage of the maximum possible AUDPC for the whole period of the experiment
- Five feet at center of middles rows was hand harvested and weighed on Oct 11



2023 – HARS - AUDPC over the Growing Season

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Navedo	Fresh Market/Slicer
Istanbul	Fresh Market/Slicer
Cupar	Processing/Dicer

200

0

8/1/2023

9/1/2023

10/1/2023

Date

Cupar, 195

Nantes, 195

Canberra, 172.5

Caravel, 180

Navedo, 172.5

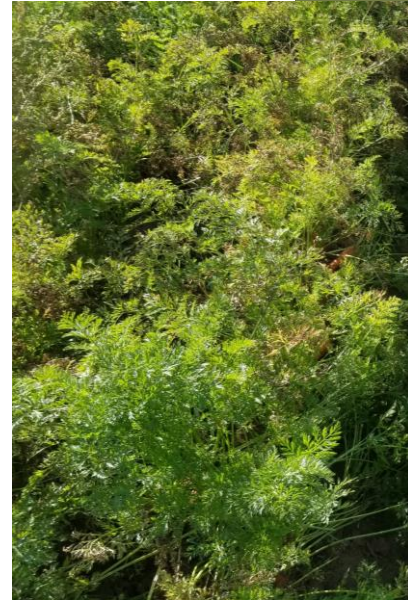
SV4128DL, 150

Naval, 142.5

Belgrado, 135

Moonraker, 135

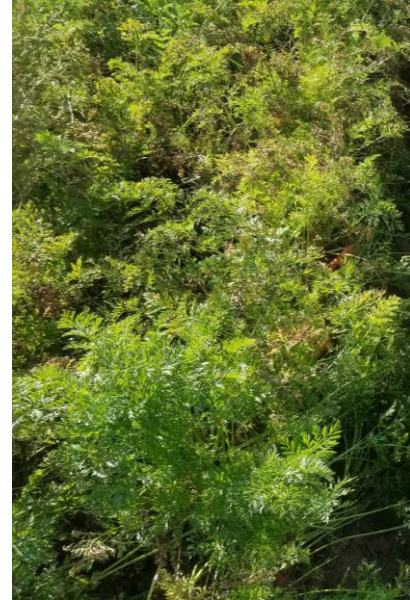
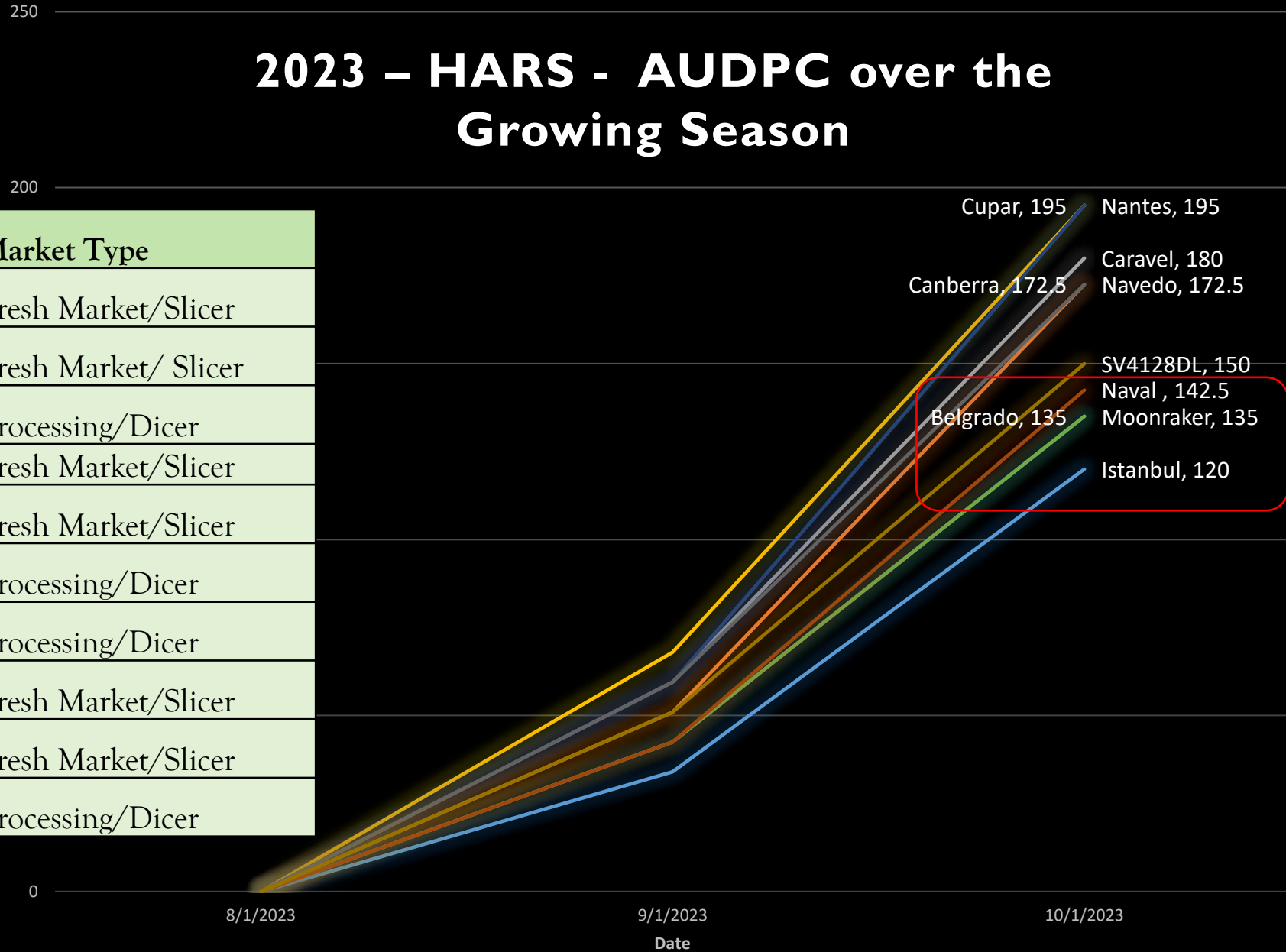
Istanbul, 120



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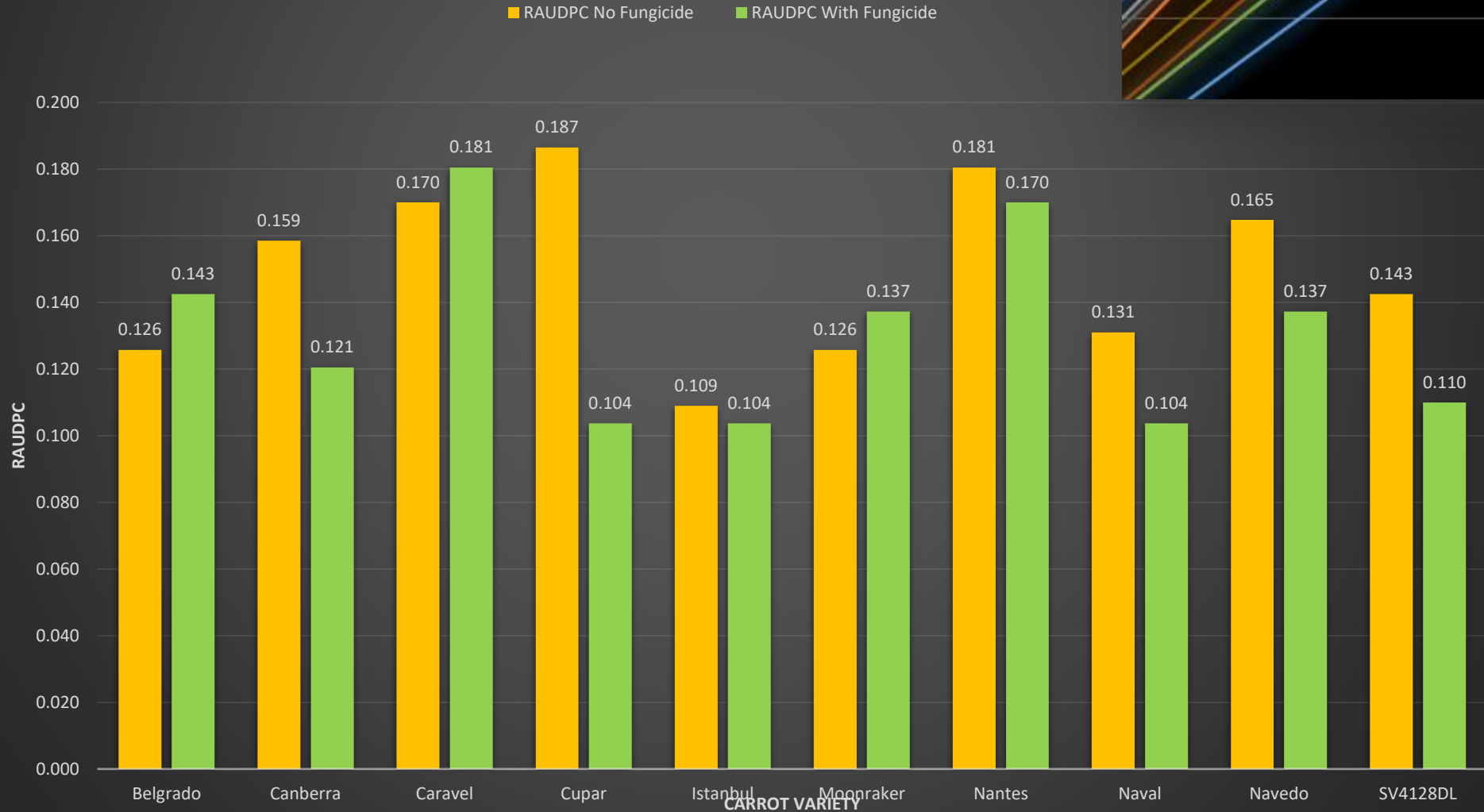
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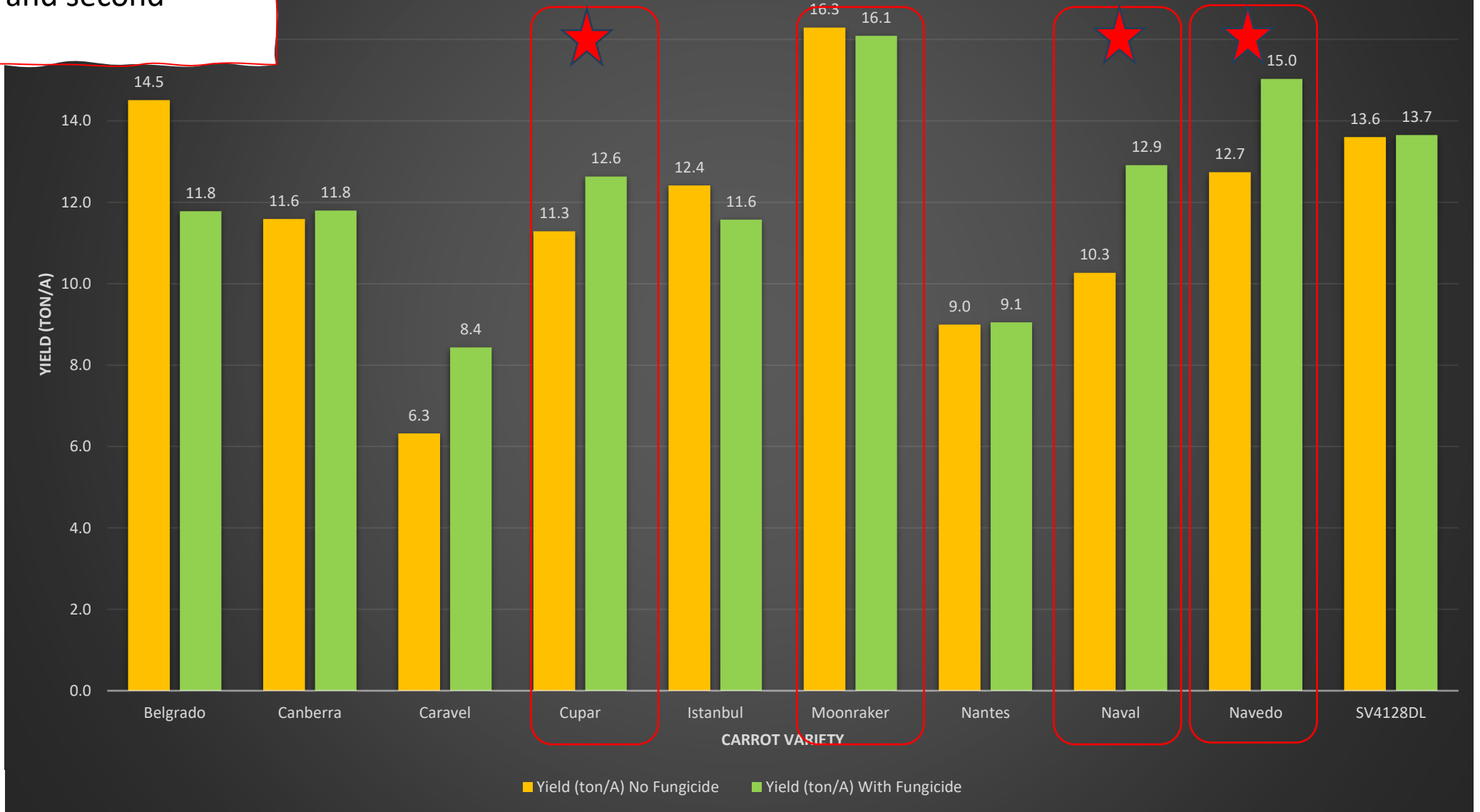
Carrot Foliar Disease Relative Area Under the Disease Progress Curve RAUDPC - 2023

Low disease pressure
Late disease onset



Caravel did not emerge and grow well in high heat (noted in first and second planting)

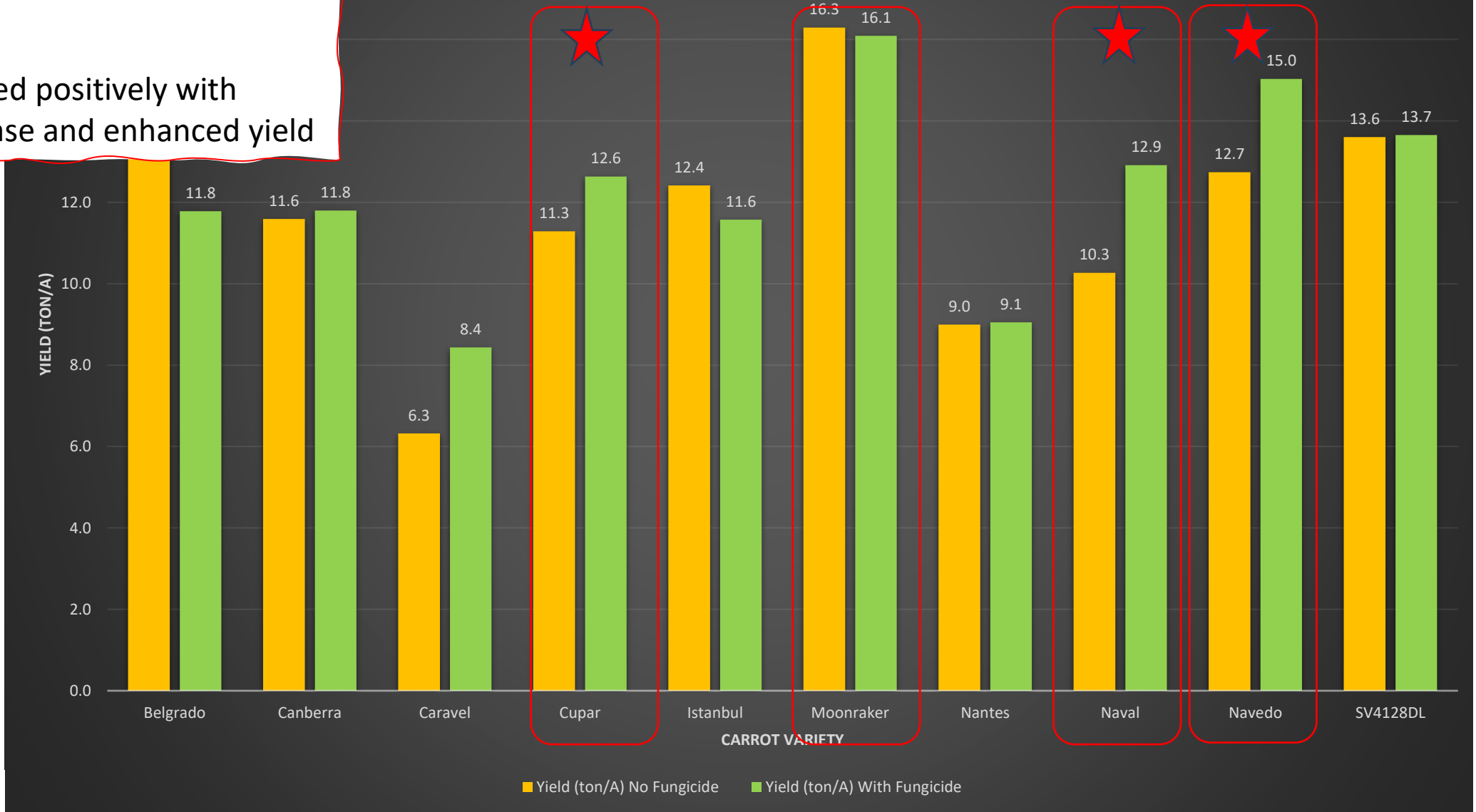
Carrot Yield (ton/A) - 2023



Carrot Yield (ton/A) - 2023

Cupar, Naval, Navedo were significantly impacted by fungicide application

All 3 responded positively with reduced disease and enhanced yield



CARROT FOLIAR DISEASE CULTIVAR EVALUATION 2023

All Varieties Together	No Fungicides	With Fungicides
Yield (ton/A)	11.8	12.3
Individual plant weight (lb)	0.738	0.768
RAUDPC	0.149	0.131

