

# Yuma Fall 2025 Romaine Trial

Lida – Fertilizer Trials

PI: Robert Masson

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Yuma County Cooperative Extension



THE UNIVERSITY OF ARIZONA

**Cooperative Extension**

Yuma County

# Trial Summary

- No major differences noted on total above ground biomass, heart circumference, heart length, and walkby percentage.
- Highly significant difference found at the 0.06 level for heart weight, favoring treatment 4: Spray Signalin and Calciolid, and Drip Rental.
- Note: Temperatures were significantly hotter than normal, advancing harvest date a week ahead of initial forecast
- Note: Aphids encountered on plants but spray was applied multiple times to control them with very minimal damage.

# Trial Details

- Product comparison trial
  - Trt 1: Grower Standard Practice Fertilizer (GSP)
  - Trt 2: GSP + Drip Signalin + Drip Rental
  - Trt 3: GSP + Spray Signalin + Spray Calciolid
  - Trt 4: GSP + Spray Signalin + Spray Calciolid + Drip Rental
- Four treatment, six replication trial
- 3-line romaine of 42” beds
- Variety: Del Sol
- Planting Date: 11 Nov 2025
- Harvest Date: 20 Feb 2026 (101 DAP)

# Spray Application Plan

- App A: 12/12 (31 DAP)
- App B: 12/22 (41 DAP)
- App C: 1/7 (57 DAP)

Reps: 6    Appl Code: A    Plots: 3.5 by 30 feet <i>Spray</i>												
Appl. Amount: 40 GAL/AC    Mix Size: 1 GAL (total for 6 plots: minimum=0.5785 GAL)												
Trt No.	Treatment Name	Form Type	Rate	Unit	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
3	Spray_Signalin D	12 oz wt/a	ABC	8.505 g/mx	2501	2802	2603	2804	2705	2506		
	Spray_Calcioolid L	12 fl oz/a	ABC	8.872 mL/mx								
4	Spray_Signalin D	12 oz wt/a	ABC	8.505 g/mx	2801	2502	2703	2604	2505	2706		
	Spray_Calcioolid L	12 fl oz/a	ABC	8.872 mL/mx								
	<del>Drip_Rentel L</del>	<del>12 fl oz/a</del>	<del>ABC</del>	<del>11.82 mL/mx</del>								

Reps: 6    Appl Code: B    Plots: 3.5 by 30 feet <i>Spray</i>												
Appl. Amount: 40 GAL/AC    Mix Size: 1 GAL (total for 6 plots: minimum=0.5785 GAL)												
Trt No.	Treatment Name	Form Type	Rate	Unit	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
3	Spray_Signalin D	12 oz wt/a	ABC	8.505 g/mx	2501	2802	2603	2804	2705	2506		
	Spray_Calcioolid L	12 fl oz/a	ABC	8.872 mL/mx								
4	Spray_Signalin D	12 oz wt/a	ABC	8.505 g/mx	2801	2502	2703	2604	2505	2706		
	Spray_Calcioolid L	12 fl oz/a	ABC	8.872 mL/mx								
	<del>Drip_Rentel L</del>	<del>12 fl oz/a</del>	<del>ABC</del>	<del>11.82 mL/mx</del>								

Reps: 6    Appl Code: C    Plots: 3.5 by 30 feet <i>Spray</i>												
Appl. Amount: 40 GAL/AC    Mix Size: 1 GAL (total for 6 plots: minimum=0.5785 GAL)												
Trt No.	Treatment Name	Form Type	Rate	Unit	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
3	Spray_Signalin D	12 oz wt/a	ABC	8.505 g/mx	2501	2802	2603	2804	2705	2506		
	Spray_Calcioolid L	12 fl oz/a	ABC	8.872 mL/mx								
4	Spray_Signalin D	12 oz wt/a	ABC	8.505 g/mx	2801	2502	2703	2604	2505	2706		
	Spray_Calcioolid L	12 fl oz/a	ABC	8.872 mL/mx								
	<del>Drip_Rentel L</del>	<del>12 fl oz/a</del>	<del>ABC</del>	<del>11.82 mL/mx</del>								

**APP A**  
 Spray at 4 leaf  
 APP-A  
 Date: 12-12-25

Spray **APP B**  
 APP-A + 14 Days  
 Date: 12-22-25

Spray **APP C**  
 APP-A + 28 Days  
 Date: 1-7-26

Calibration 15.5 scc/plot  
 5 ml of super 8 1/2 gals of water

# Drip Application Plan

- App A: 12/12 (31 DAP)
- App B: 12/22 (41 DAP)
- App C: 1/7 (57 DAP)

Reps: 6    Appl Code: A    Plots: 3.5 by 30 feet    **Drip**  
 Appl. Amount: 345 GAL/AC    Mix Size: 4.99 GAL (total for 6 plots; minimum=4.99 GAL)

Trt No.	Treatment Name	Form Type	Rate	Unit	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
2	Drip_Signalin	D	16 oz	w/a	ABC	6.561 g/mx	2601	2702	2503	2704	2805	2606
	Drip_Rental	L	16 fl oz/a		ABC	6.844 mL/mx						
4	<del>Spray_Signalin D</del>	<del>12 oz w/a</del>	<del>ABC</del>	<del>1.92 g/mx</del>			2801	2502	2703	2604	2505	2706
	<del>Spray_Calcibid L</del>	<del>12 fl oz/a</del>	<del>ABC</del>	<del>6.188 mL/mx</del>								
	Drip_Rental	L	16 fl oz/a		ABC	6.844 mL/mx						

Reps: 6    Appl Code: B    Plots: 3.5 by 30 feet    **Drip**  
 Appl. Amount: 345 GAL/AC    Mix Size: 4.99 GAL (total for 6 plots; minimum=4.99 GAL)

Trt No.	Treatment Name	Form Type	Rate	Unit	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
2	Drip_Signalin	D	16 oz	w/a	ABC	6.561 g/mx	2601	2702	2503	2704	2805	2606
	Drip_Rental	L	16 fl oz/a		ABC	6.844 mL/mx						
4	<del>Spray_Signalin D</del>	<del>12 oz w/a</del>	<del>ABC</del>	<del>1.92 g/mx</del>			2801	2502	2703	2604	2505	2706
	<del>Spray_Calcibid L</del>	<del>12 fl oz/a</del>	<del>ABC</del>	<del>6.188 mL/mx</del>								
	Drip_Rental	L	16 fl oz/a		ABC	6.844 mL/mx						

Reps: 6    Appl Code: C    Plots: 3.5 by 30 feet    **Drip**  
 Appl. Amount: 345 GAL/AC    Mix Size: 4.99 GAL (total for 6 plots; minimum=4.99 GAL)

Trt No.	Treatment Name	Form Type	Rate	Unit	Appl Code	Amt Product to Measure	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
2	Drip_Signalin	D	16 oz	w/a	ABC	6.561 g/mx	2601	2702	2503	2704	2805	2606
	Drip_Rental	L	16 fl oz/a		ABC	6.844 mL/mx						
4	<del>Spray_Signalin D</del>	<del>12 oz w/a</del>	<del>ABC</del>	<del>1.92 g/mx</del>			2801	2502	2703	2604	2505	2706
	<del>Spray_Calcibid L</del>	<del>12 fl oz/a</del>	<del>ABC</del>	<del>6.188 mL/mx</del>								
	Drip_Rental	L	16 fl oz/a		ABC	6.844 mL/mx						

**APP-A**  
 Drip at 4 leaf  
 App-A  
 Date: 12-12-25

Drip **APP-B**  
 App A + 14 Days  
 Date: 12-22-25

Drip **APP-C**  
 App A + 28 Days  
 Date: 1-7-26

# Fertilization Plan

- Base GSP fertilization program applied to all treatments
- Total # N/AC: 157
- Preplant: 200# 11-52-0 MAP (22# N)
- 12.36 Gal/A UAN 32 (45# N per application)
  - 12/8 (27 DAP)
  - 1/13 (63 DAP)
  - 2/2 (83 DAP)

# Field Map

Mar-12-2026 (T-11 S Lida Fall 2025 Romaine Trial)

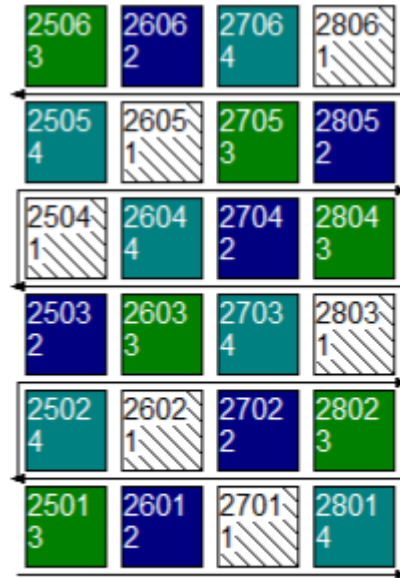
**University of Arizona**

Lida Fall Romaine Trial

Trial ID: T-11 S Lida Fall 2025 Romaine Trial  
 Protocol ID: T-11 S Lida Fall 2025 Romaine Trial  
 Project ID: T-11 D Lida Fall 2025 Romaine Trial  
 Study Director: Robert Masson Sponsor Contact:  
 Investigator: Location: Yuma Arizona Trial Year: 2025

**Trial Map Treatment Description**

Trt	Code	Description
1	CHK	UTC
2		Drip_Signalin 16 OZ WT/A;Drip_Rental 16 FL OZ/A
3		Spray_Signalin 12 OZ WT/A;Spray_Calciodid 12 FL OZ/A
4		Spray_Signalin 12 OZ WT/A;Spray_Calciodid 12 FL OZ/A;Drip_Rental 16 FL OZ/A



# Irrigation

Sprinkler rate: 0.1 IN/HR  
Drip rate: 0.186 Acre IN/HR

**Total Water Applied to full water  
treatment area 14.686 Acre IN**

Irrigation Date	Type	Full Irr Treatment Irrigation Hours	Full Irr Water Used (AC IN)
11/10	Drip	3	0.558
11/11	Sprinkler	10	1.000
11/12	Sprinkler	10	1.000
11/13	Sprinkler	8	0.800
11/14	Sprinkler	8	0.800
11/19	Sprinkler	8	0.800
11/20	Sprinkler	8	0.800
11/25	Drip	4	0.744
12/8	Drip	6	1.116
12/9	Drip	3	0.558
12/22	Drip	4	0.744
1/7	Drip	4	0.744
1/13	Drip	5	0.930
1/29	Drip	2	0.372

# Irrigation

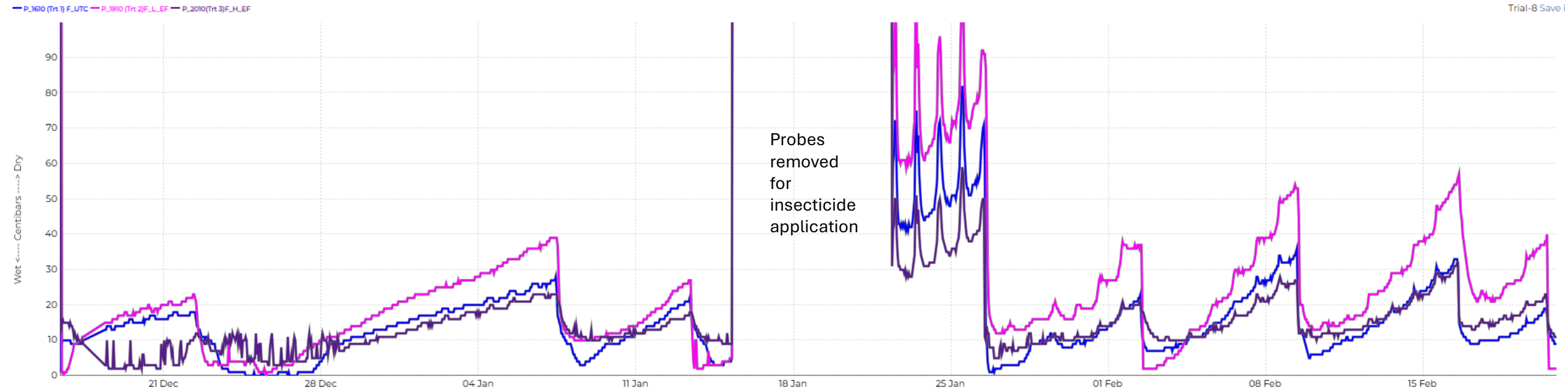
Sprinkler rate: 0.1 IN/HR

Drip rate: 0.186 Acre IN/HR

**Total Water Applied to full water  
treatment area 14.686 Acre IN**

Irrigation Date	Type	Full Irr Irrigation Hours	Full Irr Water Used (AC IN)
2/2	Drip	5	0.930
2/5	Drip	2	0.372
2/9	Drip	5	0.930
2/16	Drip	4	0.744
2/21	Drip	4	0.744
<b>Total</b>			<b>14.128</b>

# IC-10 Moisture Probe Data (Unit 1)



# Pesticide

Date	Pesticide	Rate	Type	Method
11/13	Prefar	6.0 Q/A	Pre-emerge Herbicide	Sprinkler
1/15	Orondis Ultra	8.0 Oz/A	Fungicide	Spray
1/15	Quadris	12.0 Oz/A	Fungicide	Spray
1/15	Nu-Film	4.0 Oz/A	Adjuvant	Spray
1/25	Sequoia	4.0 Oz/A	Insecticide	Spray
2/4	Verimark	10.0 Oz/A	Insecticide	Spray
2/5	Verimark	10.0	Insecticide	Drip

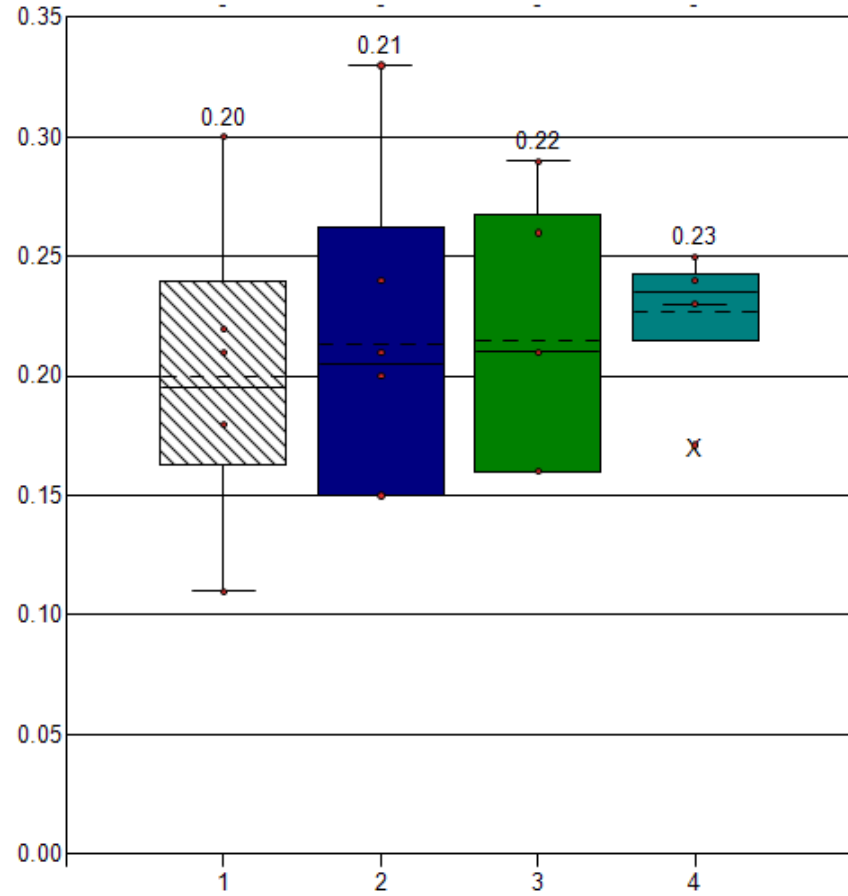
# In Season Measurements (Dr. Bhupinder Singh)

- Net photosynthesis
- Gas exchange traits
  - Transpiration rate
  - Stomatal conductance
  - Vapor pressure deficit
- Light uptake traits
  - Maximum quantum yield
  - FY/FM
  - Electron transport rate
  - Chlorophyll content
- Meteorological traits
  - Canopy temperature
  - Surface temperature



# Lida Fall Romaine Trial

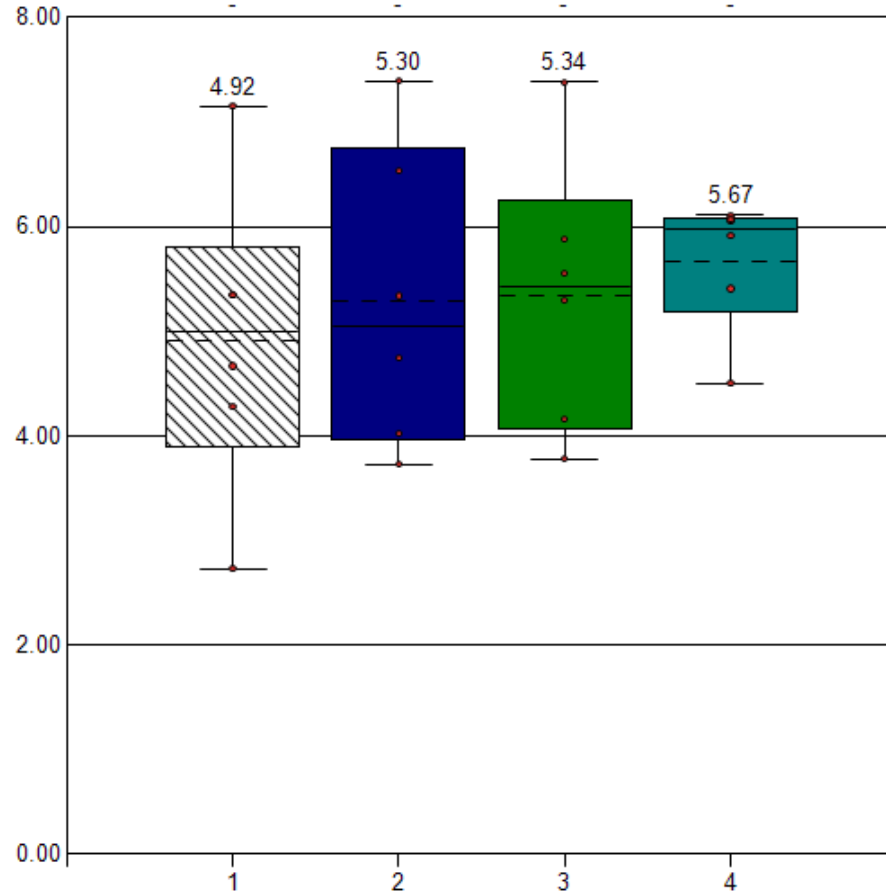
mol m<sup>-2</sup> Stomtal conductance



- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A;Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL...

# Lida Fall Romaine Trial

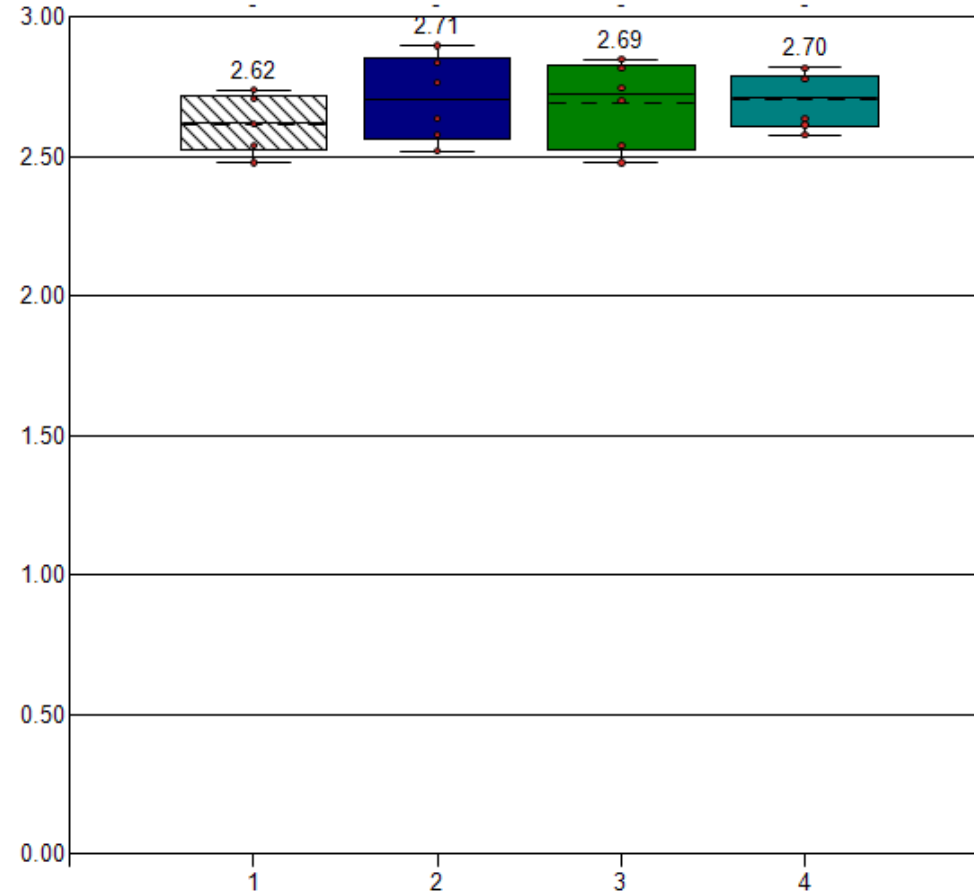
mol m<sup>-2</sup> Transpiration



- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A;Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciolid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciolid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

# Lida Fall Romaine Trial

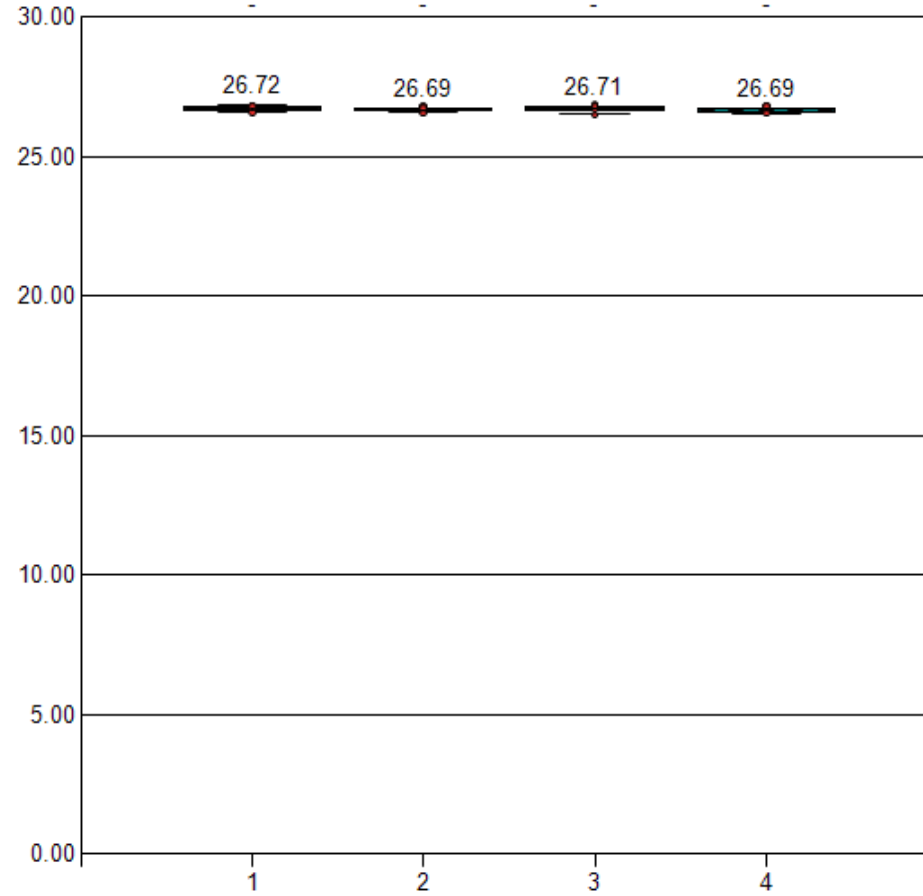
kPa VPDleaf



- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A;Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

# Lida Fall Romaine Trial

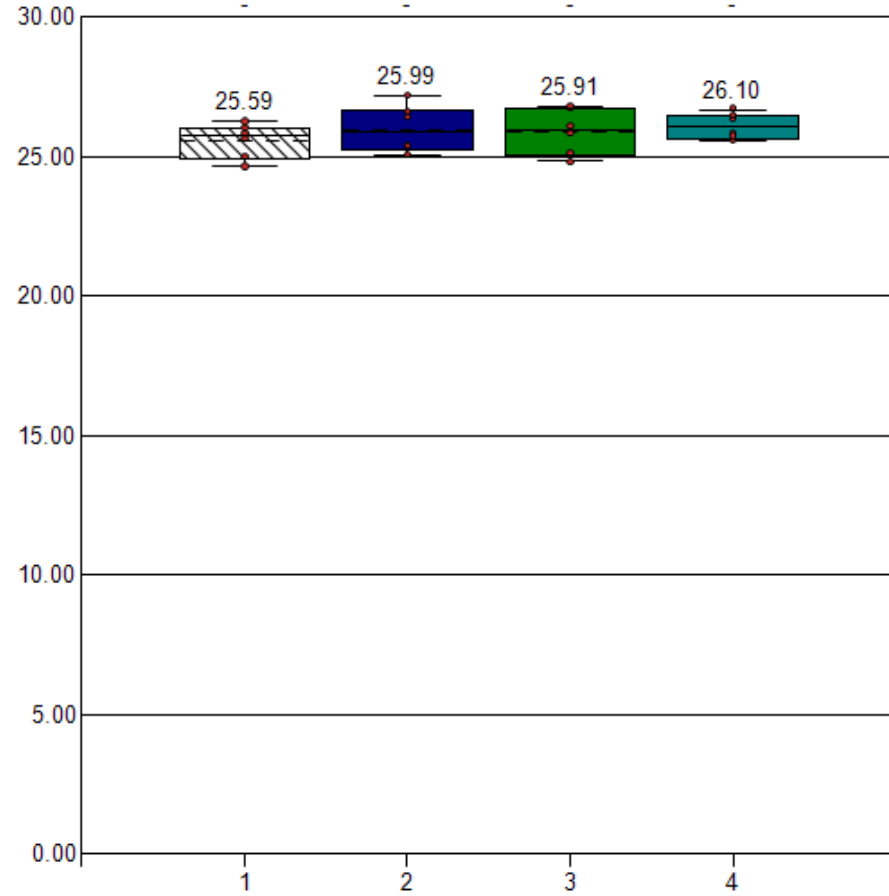
°C air temperature



- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A;Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

# Lida Fall Romaine Trial

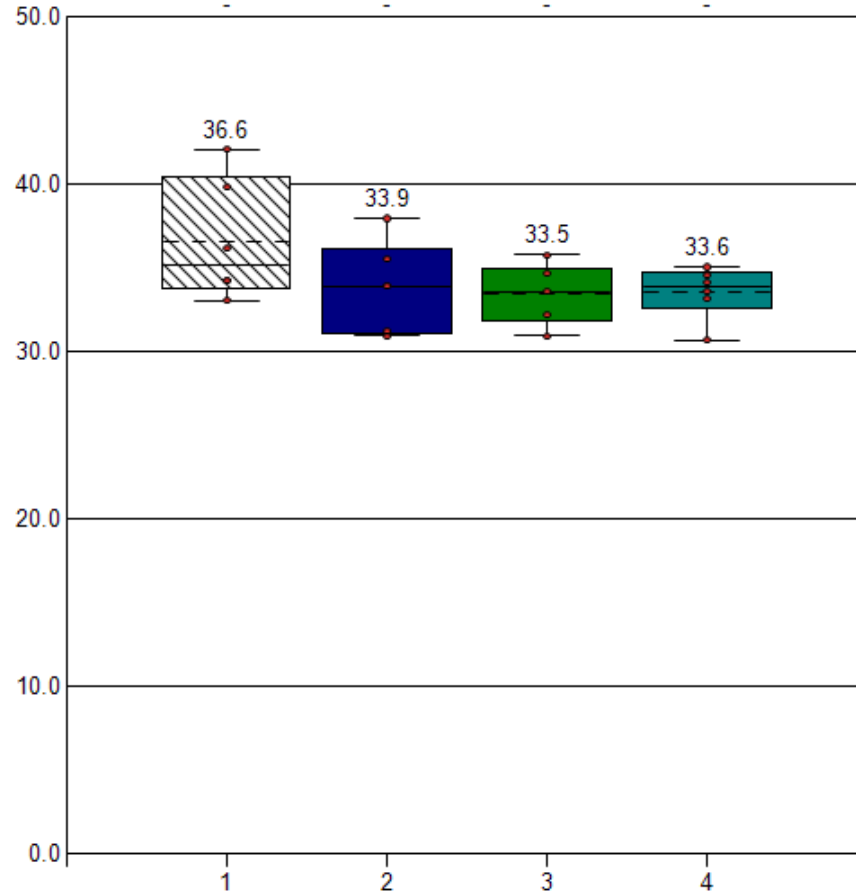
°C Canopy Temperature



- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A; Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A; Spray\_Calciodid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A; Spray\_Calciodid 12 FL OZ/A; Drip\_Rental 16 FL OZ/A

# Lida Fall Romaine Trial

µg m<sup>-2</sup> Chlorophyll content



- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A;Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL...

# Harvest

- 23 Feb 2026
- Harvest a 10 foot section of each plot
- Each plant weighed for total above ground biomass
- Hearts were trimmed from the biomass and weighed individually
- Walkby percentage was calculated by counting the plants that did not make a marketable heart (lower values = more harvestable plants per plot)
- Heart circumference and length was recorded for each trimmed head



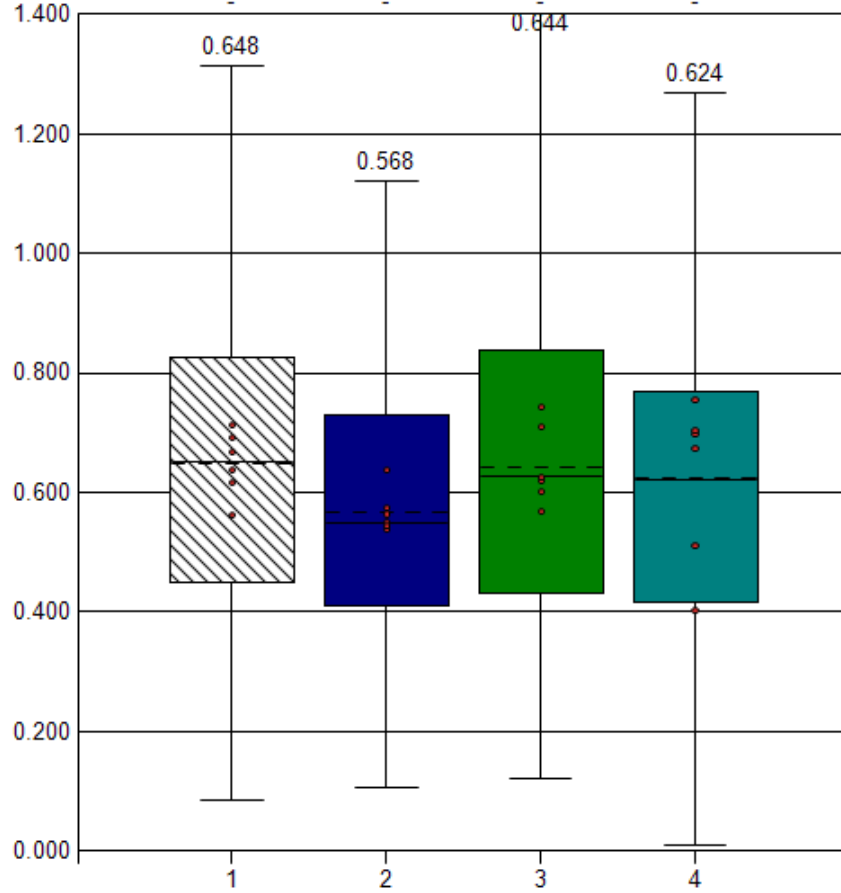






Yuma Romaine - Lida Trial - Fall 2025

KG/Plant AboveGroundBiomass



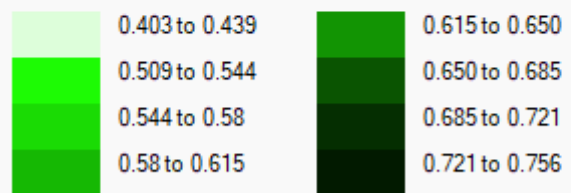
- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A; Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A; Spray\_Calciolid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A; Spray\_Calciolid 12 FL OZ/A; Drip\_Rental 16 F...

Assessment Map - Column 1 - KG/Plant AboveGroundBiomass

100% Always size to fit

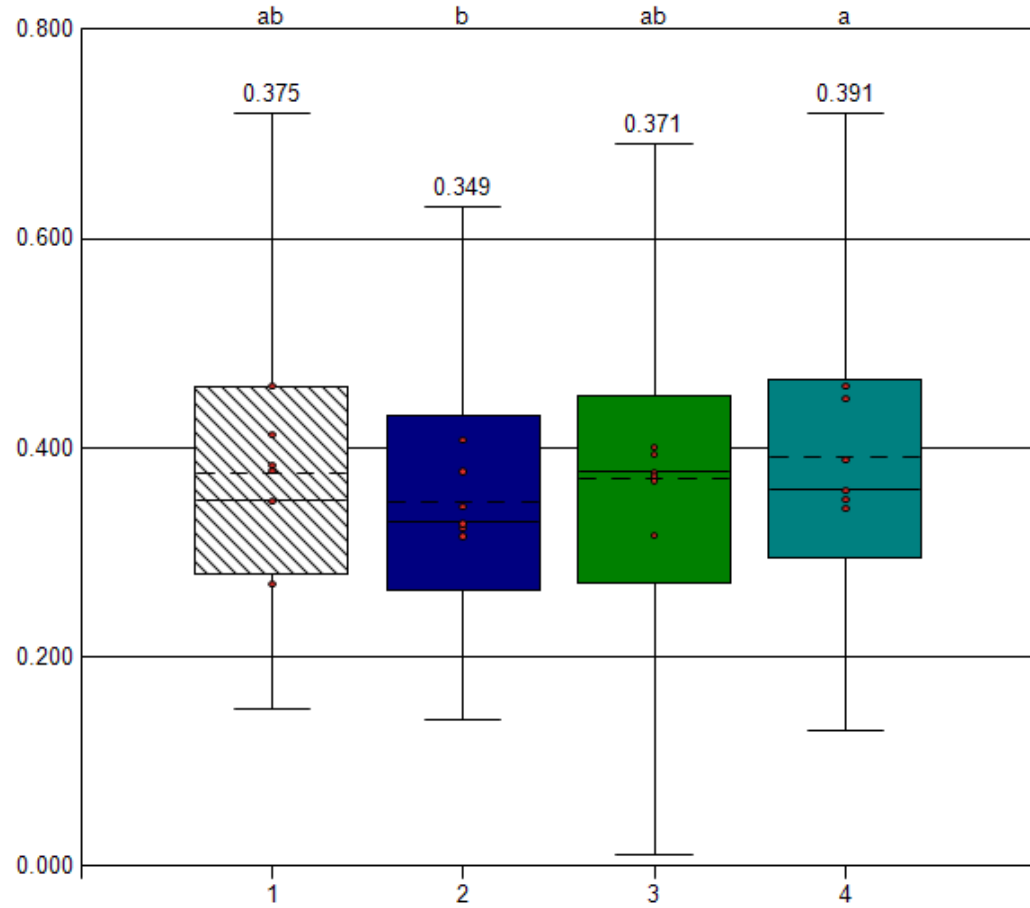


Color Description Options Treatment Description Assessment Description



Yuma Romaine - Lida Trial - Fall 2025

KG/Heart



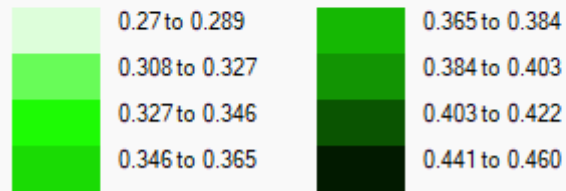
- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A;Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calcioolid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calcioolid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

Assessment Map - Column 2 - KG/Heart HeartWeight

Navigation icons: zoom in, zoom out, pan, play, zoom in, 100%, zoom out, zoom reset,  Always size to fit

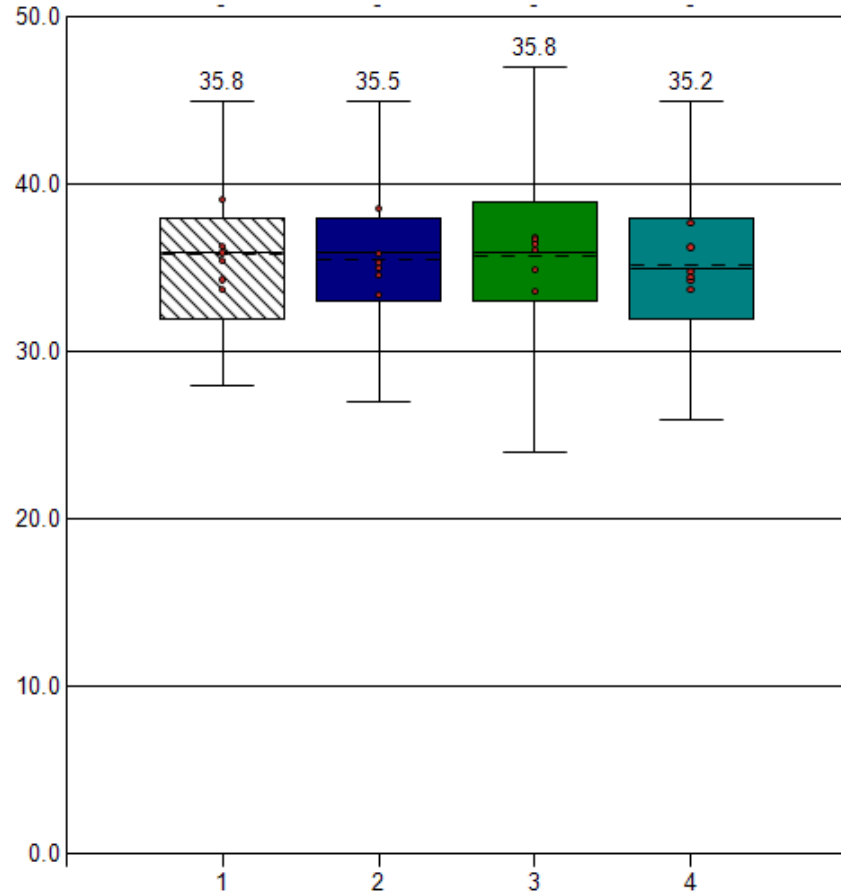


Color Description   Options   Treatment Description   Assessment Description



Yuma Romaine - Lida Trial - Fall 2025

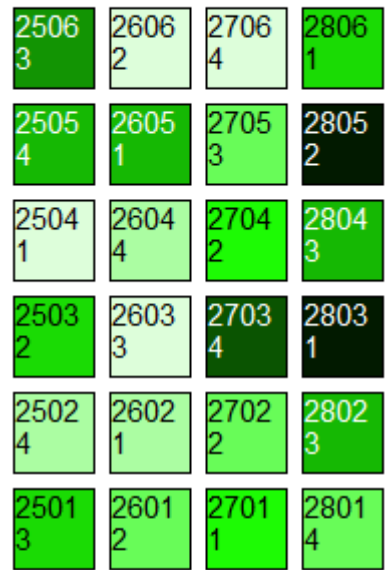
CM/Heart HeartCircumference



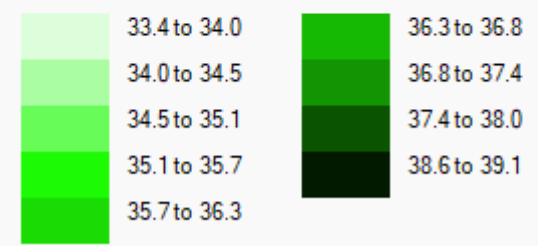
- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A;Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciloid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciloid 12 FL OZ/A;Drip\_Rental 16 FL...

Assessment Map - Column 3 - CM/Heart HeartCircumference

Navigation icons: zoom in, zoom out, pan, play, refresh, 100%, Always size to fit

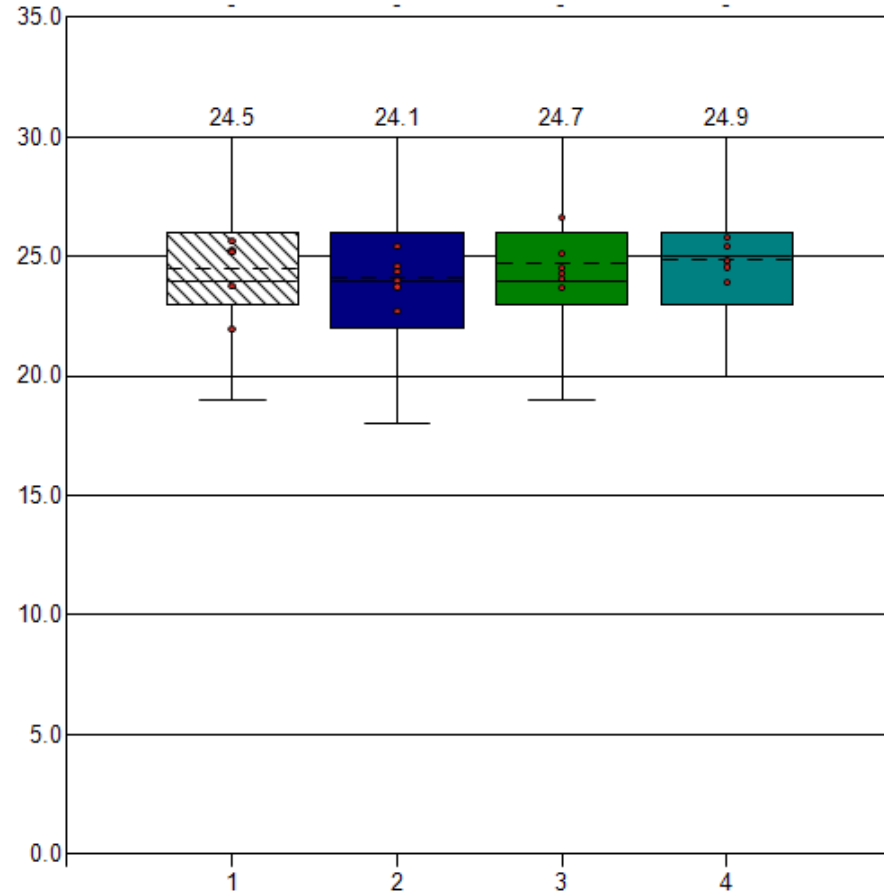


Color Description    Options    Treatment Description    Assessment Description



Yuma Romaine - Lida Trial - Fall 2025

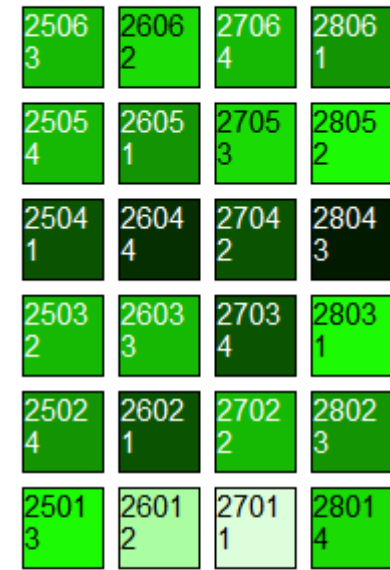
CM/Heart HeartLength



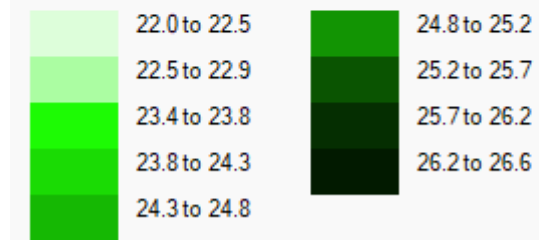
- 1 UTC
- 2 Drip\_Signalin 16 OZ WT/A; Drip\_Rental 16 FL OZ/A
- 3 Spray\_Signalin 12 OZ WT/A; Spray\_Calciolid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A; Spray\_Calciolid 12 FL OZ/A; Drip\_Rental 16 FL OZ/A

Assessment Map - Column 4 - CM/Heart HeartLength

Navigation icons: Home, Back, Forward, Stop, Refresh, and a checked box for "Always size to fit". Zoom level: 100%.

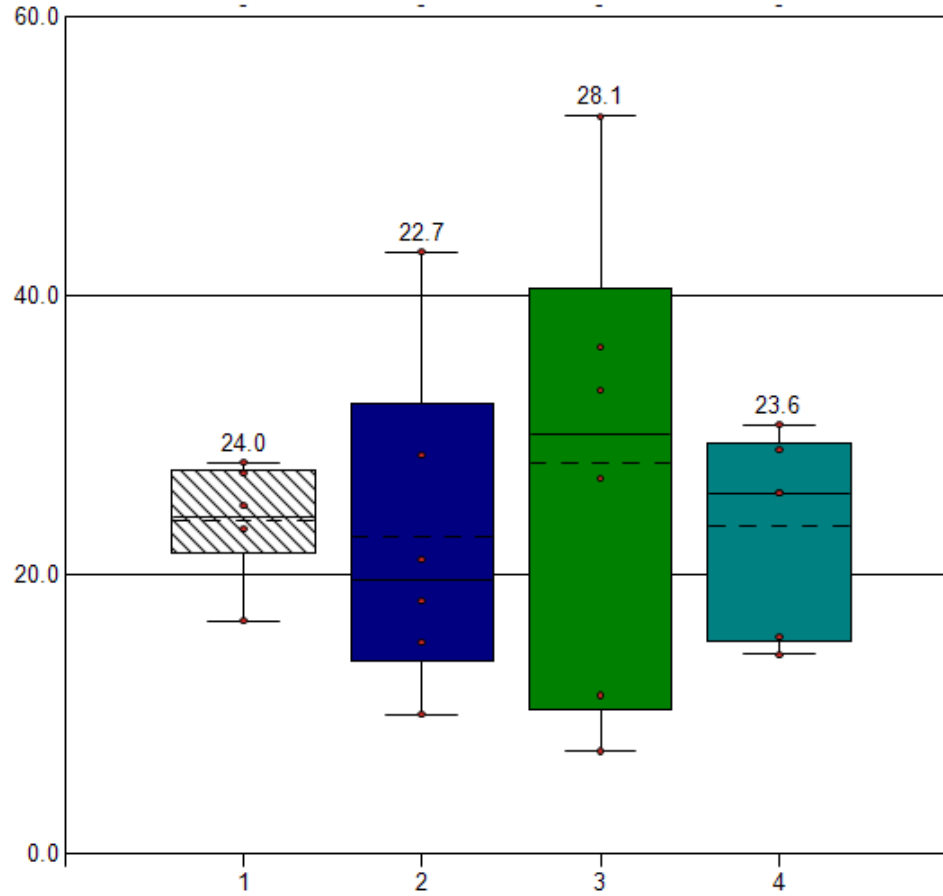




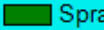

Color Description    Options    Treatment Description    Assessment Description



Yuma Romaine - Lida Trial - Fall 2025

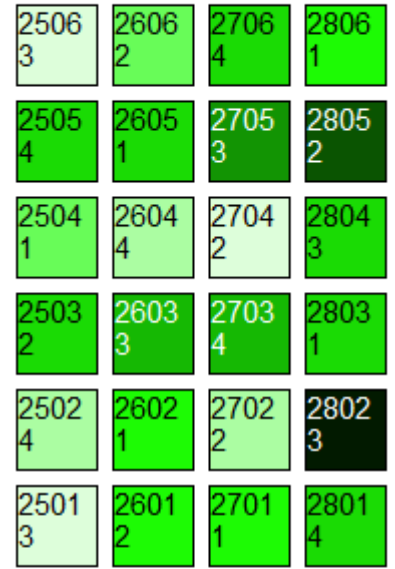
WalkbyPercent



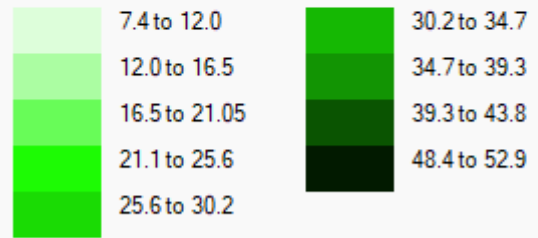
- 1  UTC
- 2  Drip\_Signalin 16 OZ WT/A;Drip\_Rental 16 FL OZ/A
- 3  Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
- 4  Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

Assessment Map - Column 5 - WalkbyPercent

Navigation icons: zoom in, zoom out, pan, home, 100%, zoom in, Always size to fit (checked)



Color Description    Options    Treatment Description    Assessment Description



## University of Arizona

Lida Fall Romaine Trial							
Trial ID: T-11 S Lida Fall 2025 Romaine Trial							
Protocol ID: T-11 S Lida Fall 2025 Romaine Trial Location: Yuma Arizona Trial Year: 2025							
Project ID: T-11 D Lida Fall 2025 Romaine Trial							
Study Director: Robert Masson Sponsor Contact:							
Investigator:							
SE Group No.		1	2	3	4	5	
Rating Unit		KG/Plant	KG/Heart	CM/Heart	CM/Heart		
Rating Min/Max/Interval		0.01, 2, -	0.01, 2, -	1, 60, -	1, 60, -		
Number of Subsamples		38	31	30	31	1	
Description		AboveGroundBiom>	HeartWeight	HeartCircumfere>	HeartLength	WalkbyPercent	
Number of Decimals		3	3	1	1	1	
Data Entry Date		Mar-12-2026	Mar-12-2026	Mar-12-2026	Mar-12-2026	Mar-12-2026	
Trt Treatment No. Name	Rate Rate Unit	Appl Code	1*	2*	3*	4*	5*
1 UTC			0.648 -	0.375 -	35.8 -	24.5 -	24.0 -
2 Drip_Signalin	16 oz wt/a	ABC	0.568 -	0.349 -	35.5 -	24.1 -	22.7 -
Drip_Rental	16 fl oz/a	ABC					
3 Spray_Signalin	12 oz wt/a	ABC	0.644 -	0.371 -	35.8 -	24.7 -	28.1 -
Spray_Super_8_Spreader/Sticker	0.5 pt/100 gal	ABC					
Spray_Calciodid	12 fl oz/a	ABC					
4 Spray_Signalin	12 oz wt/a	ABC	0.624 -	0.391 -	35.2 -	24.9 -	23.6 -
Spray_Calciodid	12 fl oz/a	ABC					
Spray_Super_8_Spreader/Sticker	0.5 pt/100 gal	ABC					
Drip_Rental	16 fl oz/a	ABC					
LSD P=.05			0.0965	0.0309	2.01	0.74	12.36
Standard Deviation			0.0784	0.0251	1.63	0.60	10.05
CV			12.63	6.75	4.58	2.44	40.9
Levene's F^A			0.624	0.295	0.863	5.19*	1.408
Levene's Prob(F)			0.608	0.828	0.477	0.008*	0.27
Shapiro-Wilk^A			0.9852	0.952	0.9717	0.9505	0.962
P(Shapiro-Wilk)^A			0.9697	0.2987	0.7095	0.2779	0.48
Skewness^A			-0.2905	-0.4594	-0.2384	0.0443	0.5798
P(Skewness)^A			0.5444	0.3408	0.6185	0.9261	0.232
Kurtosis^A			0.4175	0.2626	0.167	-0.7505	1.5787
P(Kurtosis)^A			0.6534	0.7774	0.8572	0.4219	0.0988
Replicate F			1.443	11.096	0.923	8.647	1.833
Replicate Prob(F)			0.2658	0.0001	0.4929	0.0005	0.1668
Treatment F			1.332	2.946	0.215	1.809	0.336
Treatment Prob(F)			0.3011	0.0668	0.8842	0.1887	0.7994

## University of Arizona

Lida Fall Romaine Trial							
Trial ID: T-11 S Lida Fall 2025 Romaine Trial Protocol ID: T-11 S Lida Fall 2025 Romaine Trial Project ID: T-11 D Lida Fall 2025 Romaine Trial Location: Yuma Arizona Trial Year: 2025 Study Director: Robert Masson Sponsor Contact: Investigator:							
SE Group No.		7	8	9	10	11	
Rating Unit		mol m <sup>-2</sup>	mol m <sup>-2</sup>	kPa	°C	°C	
Rating Min/Max/Interval							
Number of Subsamples		1	1	1	1	1	
Description		Stomatal conduct>	Transpiration	VPDleaf	air temperature	Canopy Temperat>	
Number of Decimals		2	2	2	2	2	
Data Entry Date		Mar-12-2026	Mar-12-2026	Mar-12-2026	Mar-12-2026	Mar-12-2026	
Trt Treatment No. Name	Rate Unit	Appl Code	6*	7*	8*	9*	10*
1	UTC		0.20 -	4.92 -	2.62 -	26.72 -	25.59 -
2	Drip_Signalin Drip_Rental	16 oz wt/a 16 fl oz/a ABC ABC	0.21 -	5.30 -	2.71 -	26.69 -	25.99 -
3	Spray_Signalin Spray_Super_8_Spreader/Sticker Spray_Calciofid	12 oz wt/a 0.5 pt/100 gal 12 fl oz/a ABC ABC ABC	0.22 -	5.34 -	2.69 -	26.71 -	25.91 -
4	Spray_Signalin Spray_Calciofid Spray_Super_8_Spreader/Sticker Drip_Rental	12 oz wt/a 12 fl oz/a 0.5 pt/100 gal 16 fl oz/a ABC ABC ABC ABC	0.23 -	5.67 -	2.70 -	26.69 -	26.10 -
LSD P=.05			0.064	1.526	0.160	0.113	0.868
Standard Deviation			0.052	1.240	0.130	0.092	0.705
CV			24.21	23.36	4.85	0.34	2.72
Levene's F^			2.349	2.68	0.57	0.236	1.226
Levene's Prob(F)			0.103	0.075	0.641	0.87	0.326
Shapiro-Wilk^			0.9735	0.971	0.9589	0.9243	0.9486
P(Shapiro-Wilk)^			0.7542	0.6924	0.4174	0.0726	0.2523
Ske wness^			0.2191	0.1799	-0.077	-0.7549	0.272
P(Ske wness)^			0.6471	0.7068	0.872	0.1236	0.5703
Kurtosis^			-0.598	-0.4111	-1.0652	0.2565	-1.0454
P(Kurtosis)^			0.5212	0.6584	0.2577	0.7824	0.2664
Replicate F			1.466	1.060	0.883	0.133	0.844
Replicate Prob(F)			0.2584	0.4204	0.5164	0.9822	0.5395
Treatment F			0.267	0.375	0.623	0.179	0.579
Treatment Prob(F)			0.8481	0.7724	0.6112	0.9091	0.6379

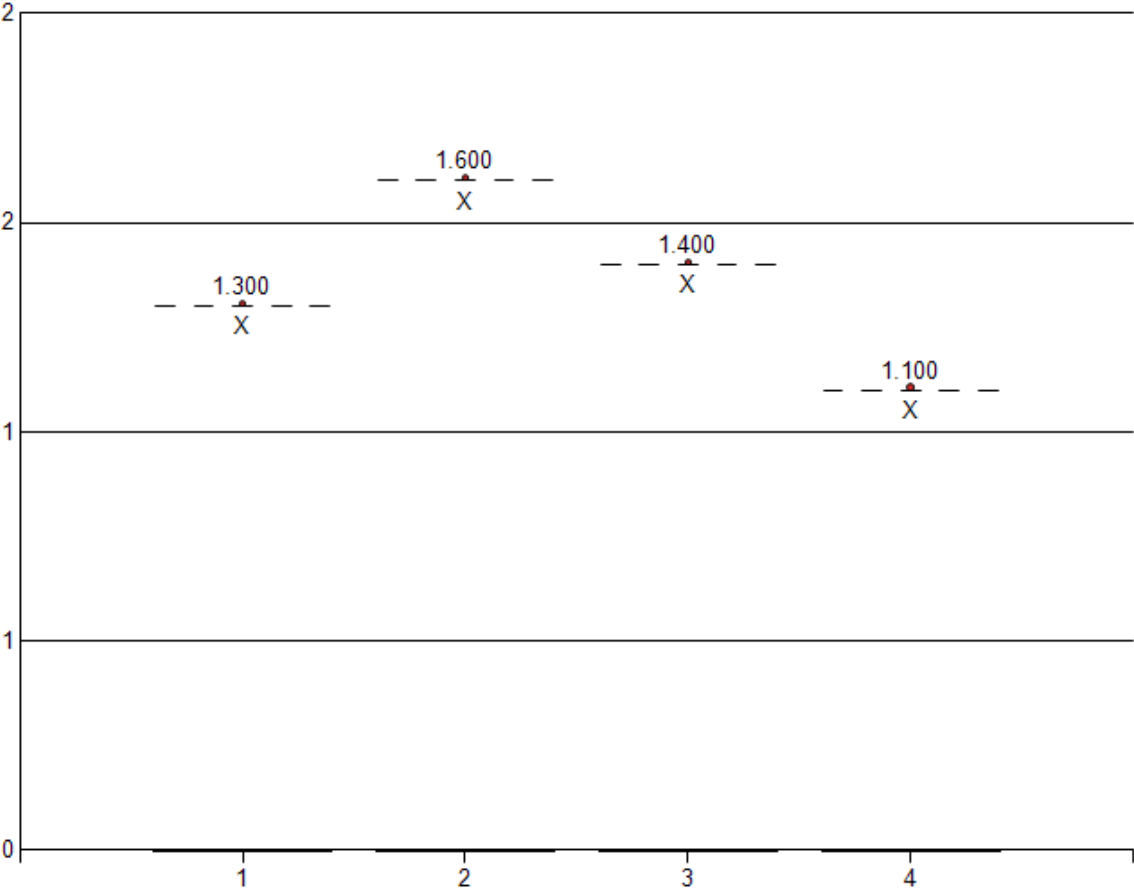
## University of Arizona

Lida Fall Romaine Trial			
Trial ID: T-11 S Lida Fall 2025 Romaine Trial Protocol ID: T-11 S Lida Fall 2025 Romaine Trial      Location: Yuma Arizona      Trial Year: 2025 Project ID: T-11 D Lida Fall 2025 Romaine Trial Study Director: Robert Masson      Sponsor Contact: Investigator:			
SE Group No.			12
Rating Unit			µg m <sup>-2</sup>
Rating Min/Max/Interval			
Number of Subsamples			1
Description			Chlorophyll con>
Number of Decimals			1
Data Entry Date			Mar-12-2026
Trt No.	Treatment Name	Rate Unit	Appl Code
			11* dAL
1	UTC		36.5 -
2	Drip_Signalin Drip_Rental	16 oz wt/a 16 fl oz/a	ABC ABC
3	Spray_Signalin Spray_Super_8_Spreader/Sticker Spray_Calciofid	12 oz wt/a 0.5 pt/100 gal 12 fl oz/a	ABC ABC ABC
4	Spray_Signalin Spray_Calciofid Spray_Super_8_Spreader/Sticker Drip_Rental	12 oz wt/a 12 fl oz/a 0.5 pt/100 gal 16 fl oz/a	ABC ABC ABC ABC
LSD P=	.05		3.16 -3.17
Standard Deviation			0.03t
CV			2.01t
Levene's F <sup>A</sup>			1.12
Levene's Prob(F)			0.364
Shapiro-Wilk <sup>A</sup>			0.9688
P(Shapiro-Wilk) <sup>A</sup>			0.6381
Ske wness <sup>A</sup>			0.1989
P(Ske wness) <sup>A</sup>			0.6776
Kurtosis <sup>A</sup>			-0.5491
P(Kurtosis) <sup>A</sup>			0.5555
Replicate F			0.756
Replicate Prob(F)			0.5948
Treatment F			1.886
Treatment Prob(F)			0.1754

**End of Season Soil Tests**

Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

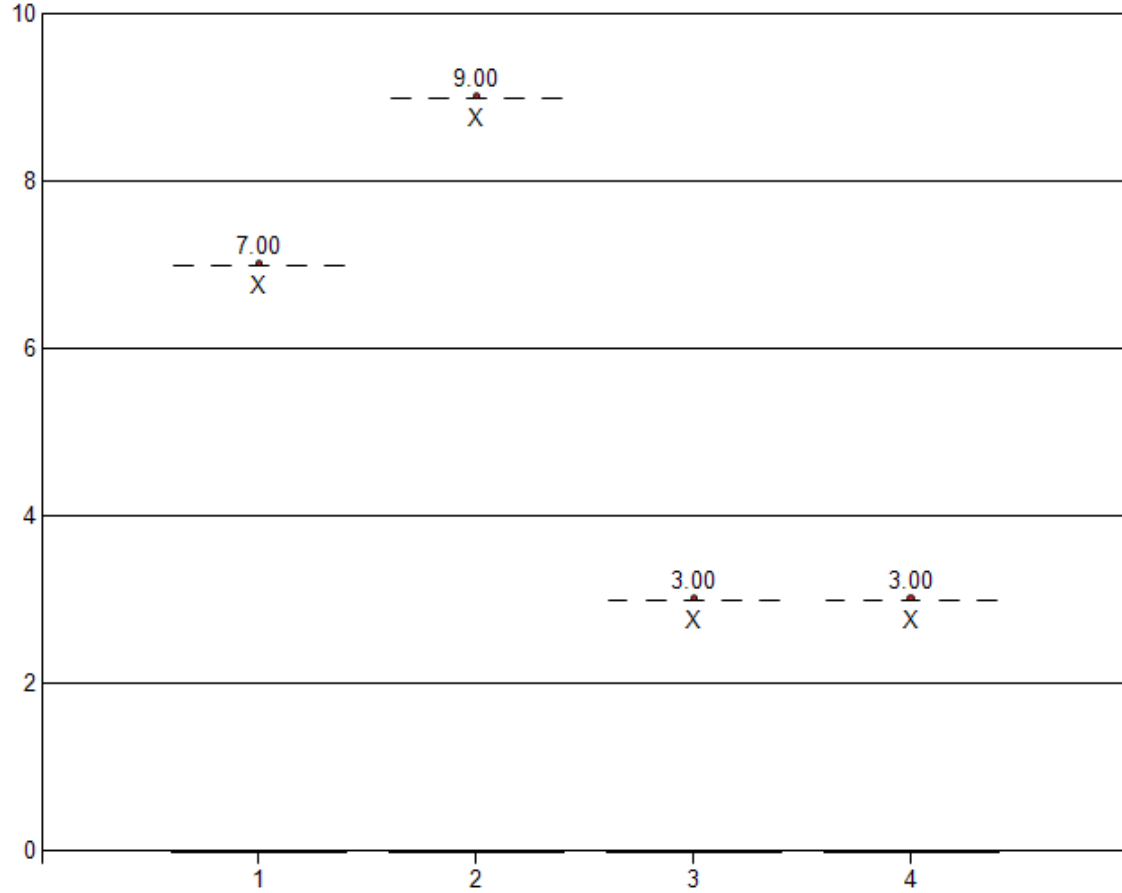
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- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

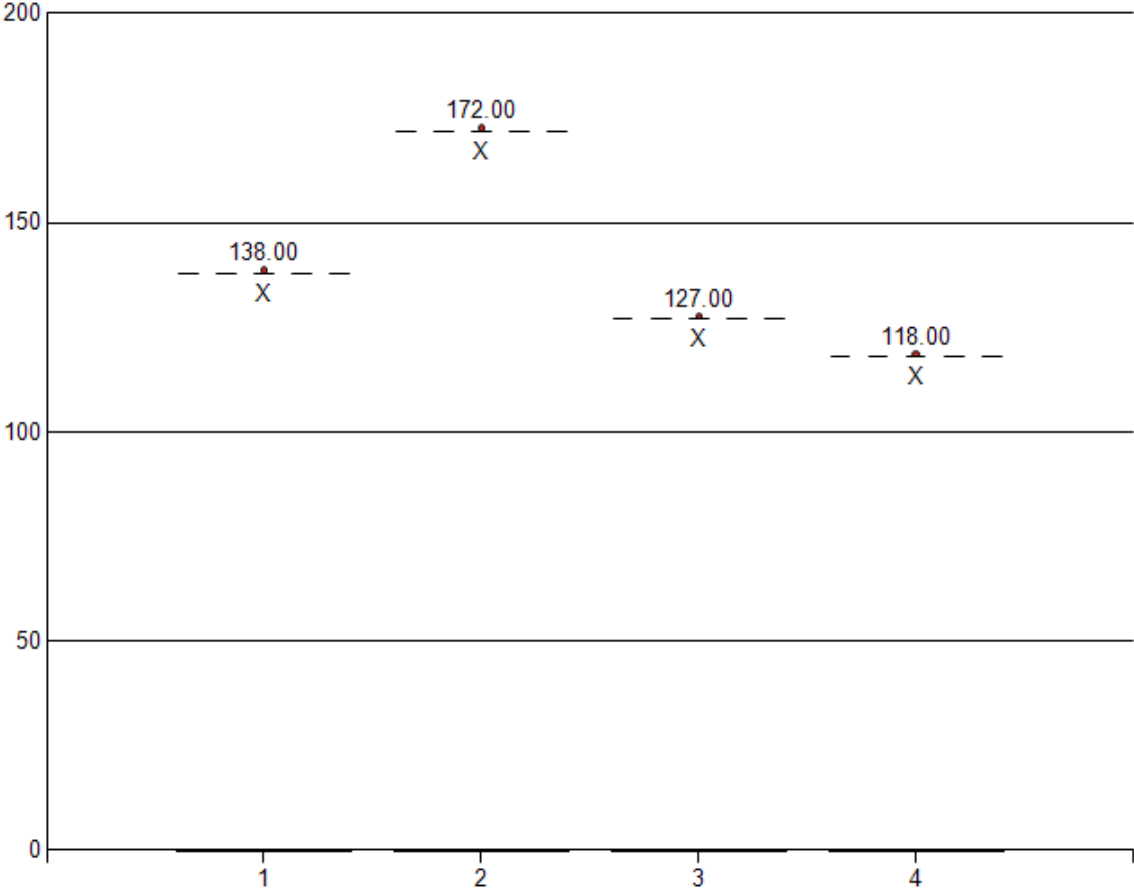
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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

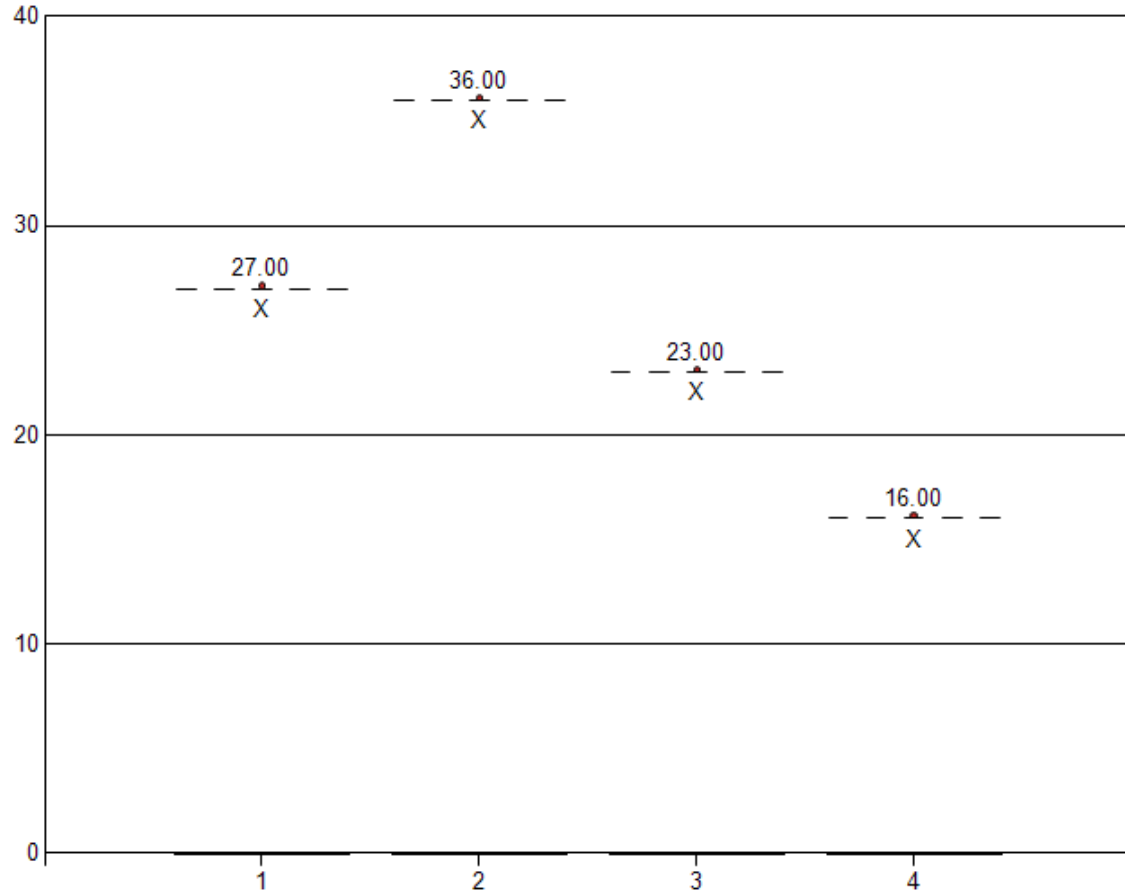
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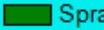



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

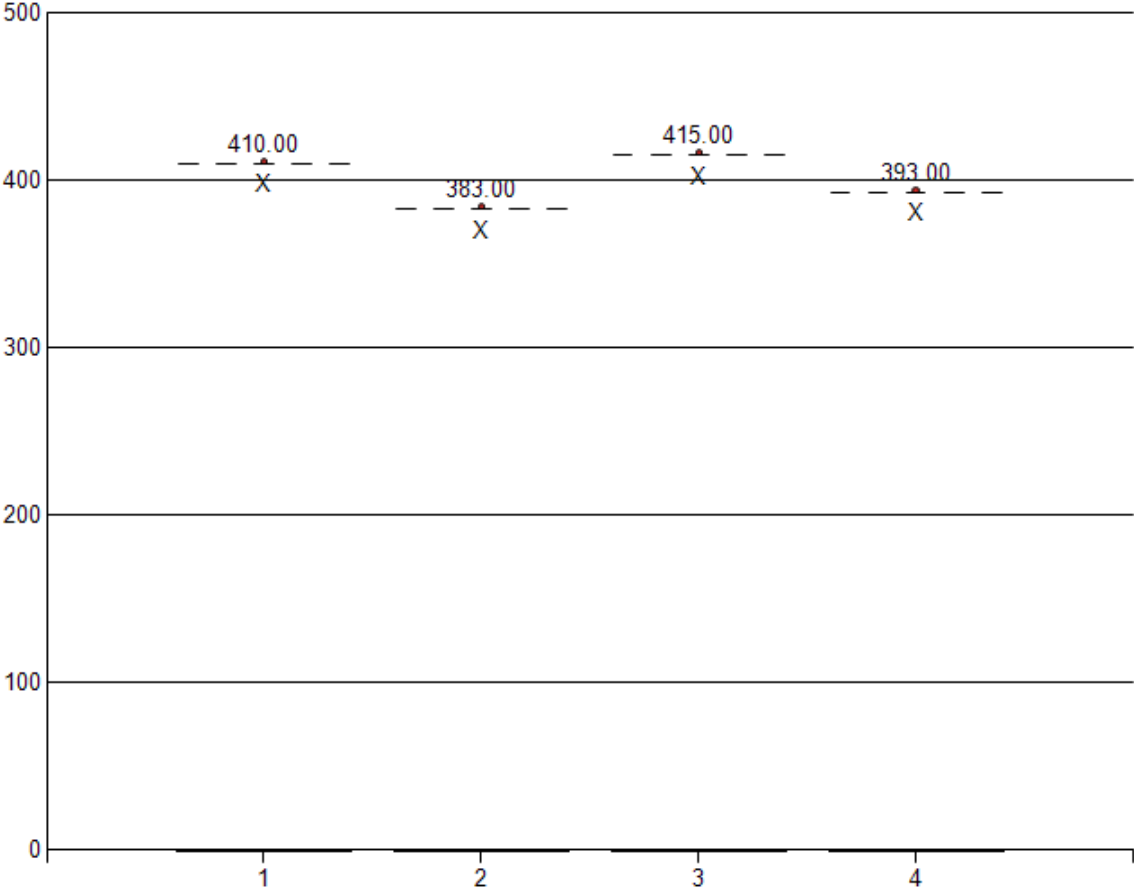
Olsen



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- 3  Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

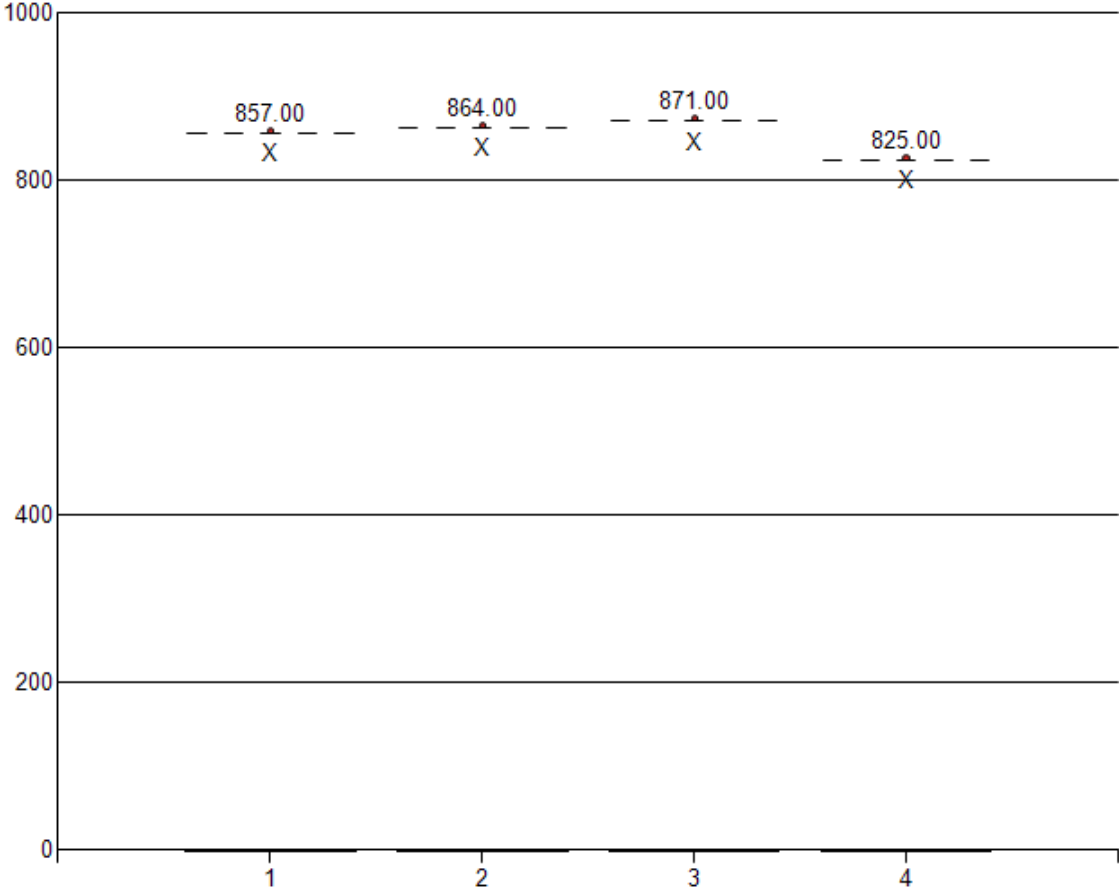
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- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

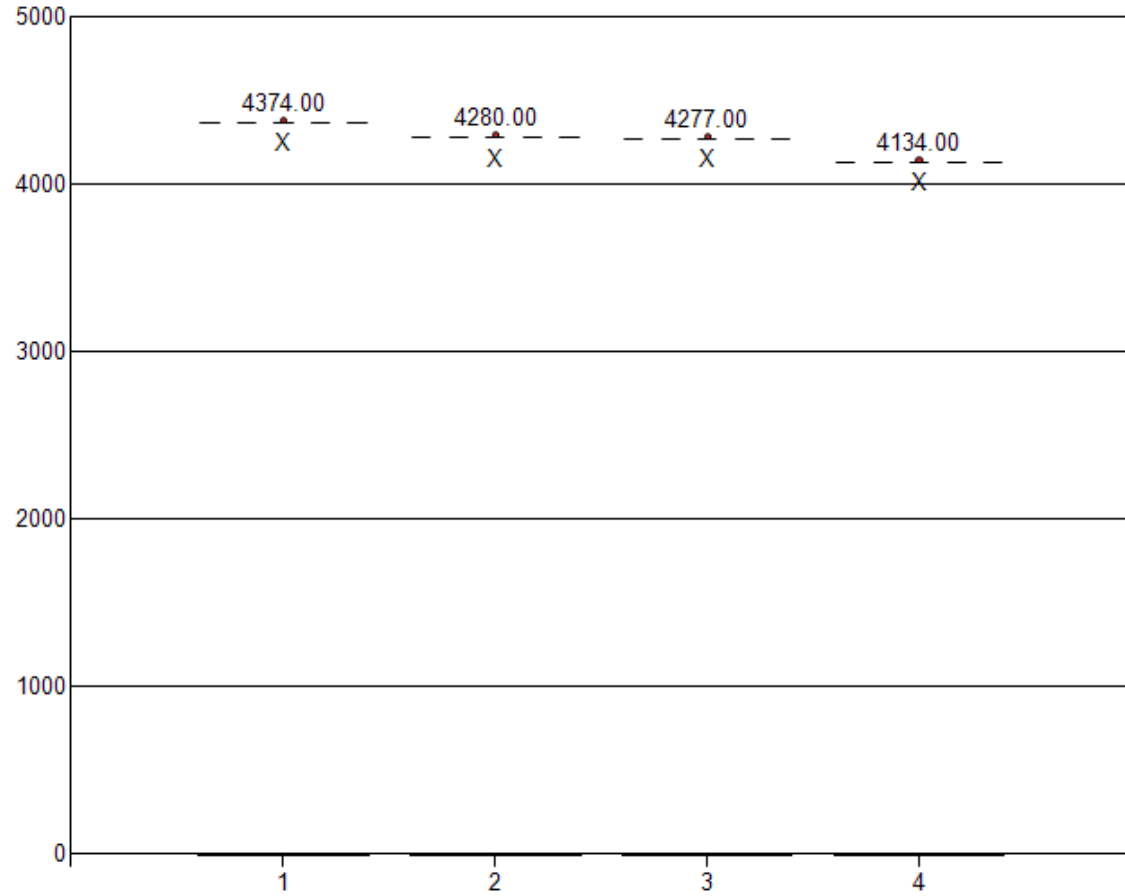
Mg



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

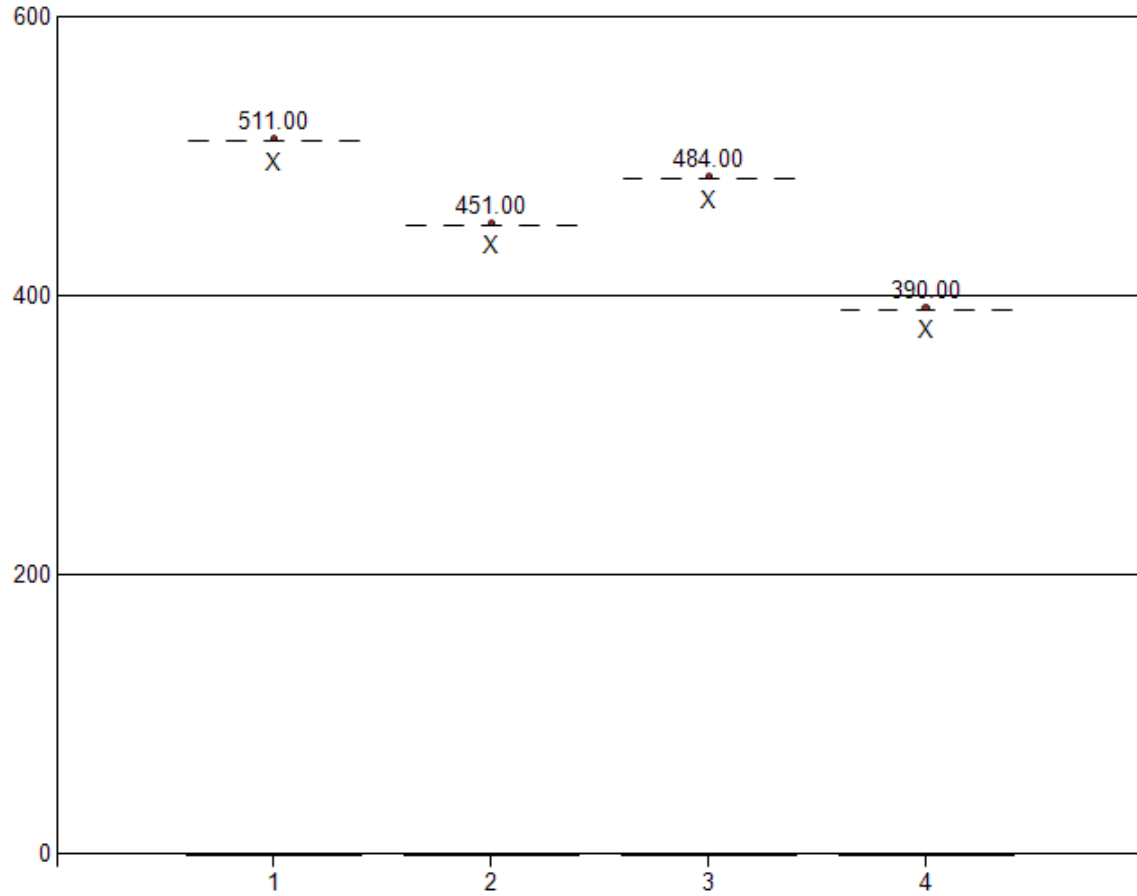
Ca



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- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

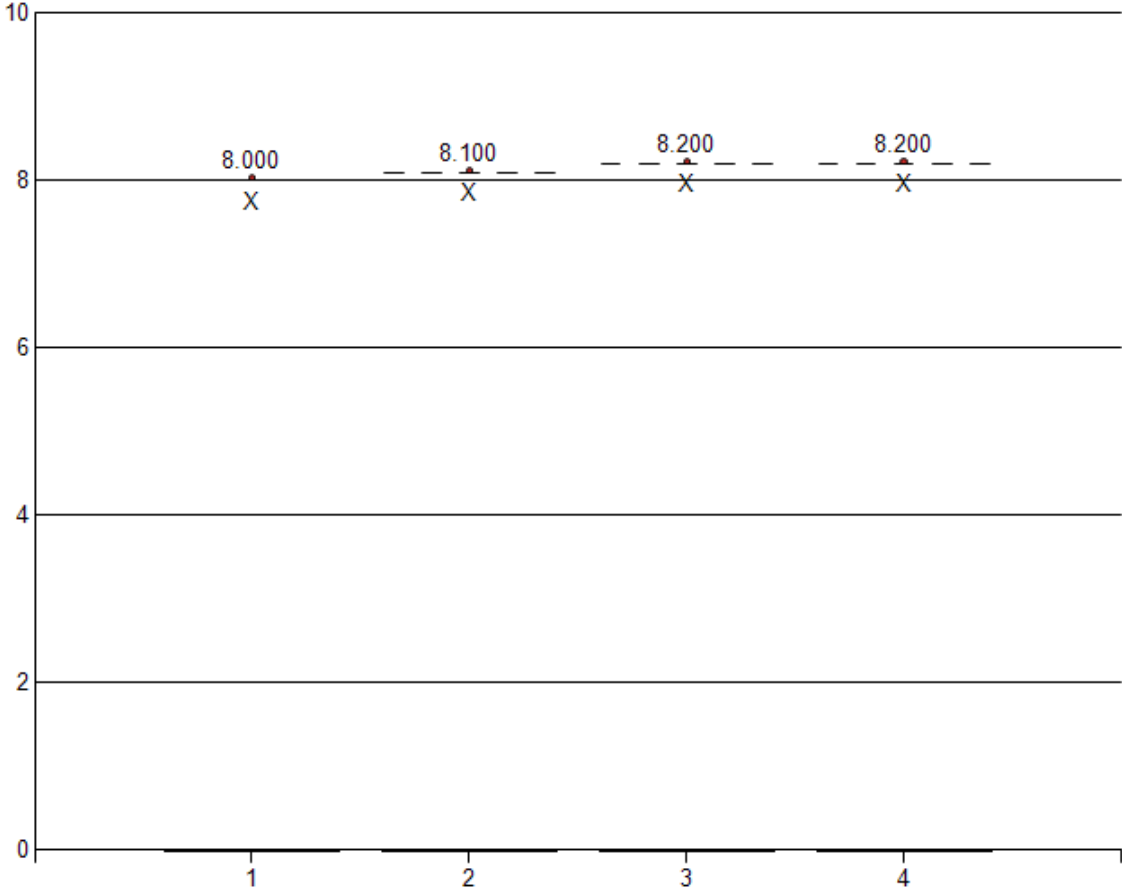
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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

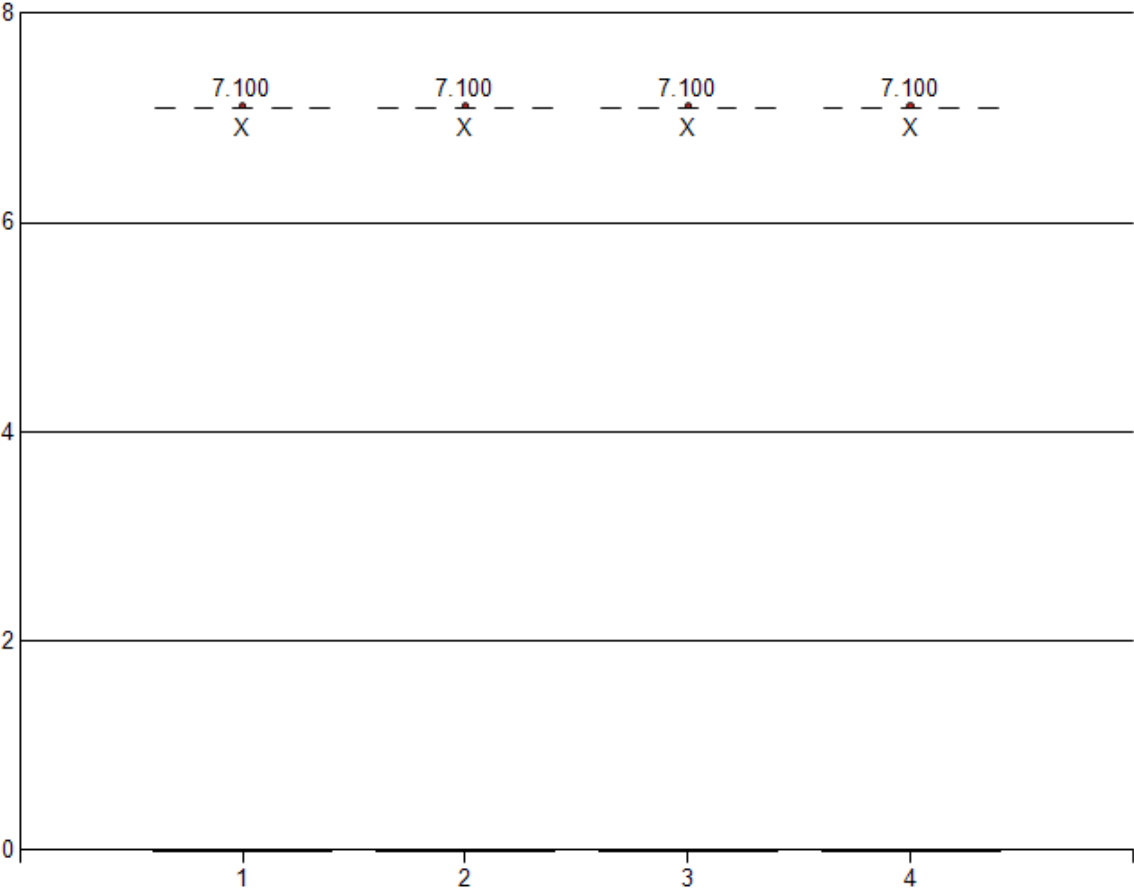
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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

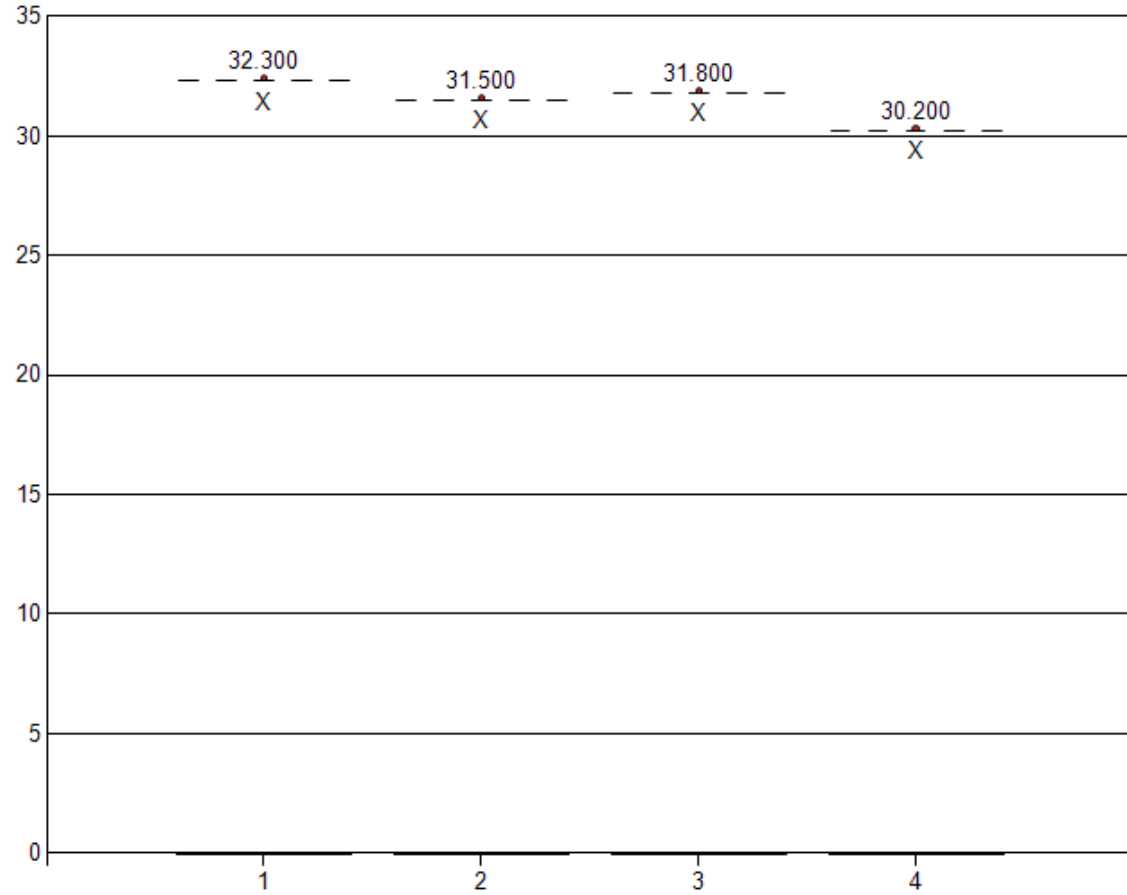
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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

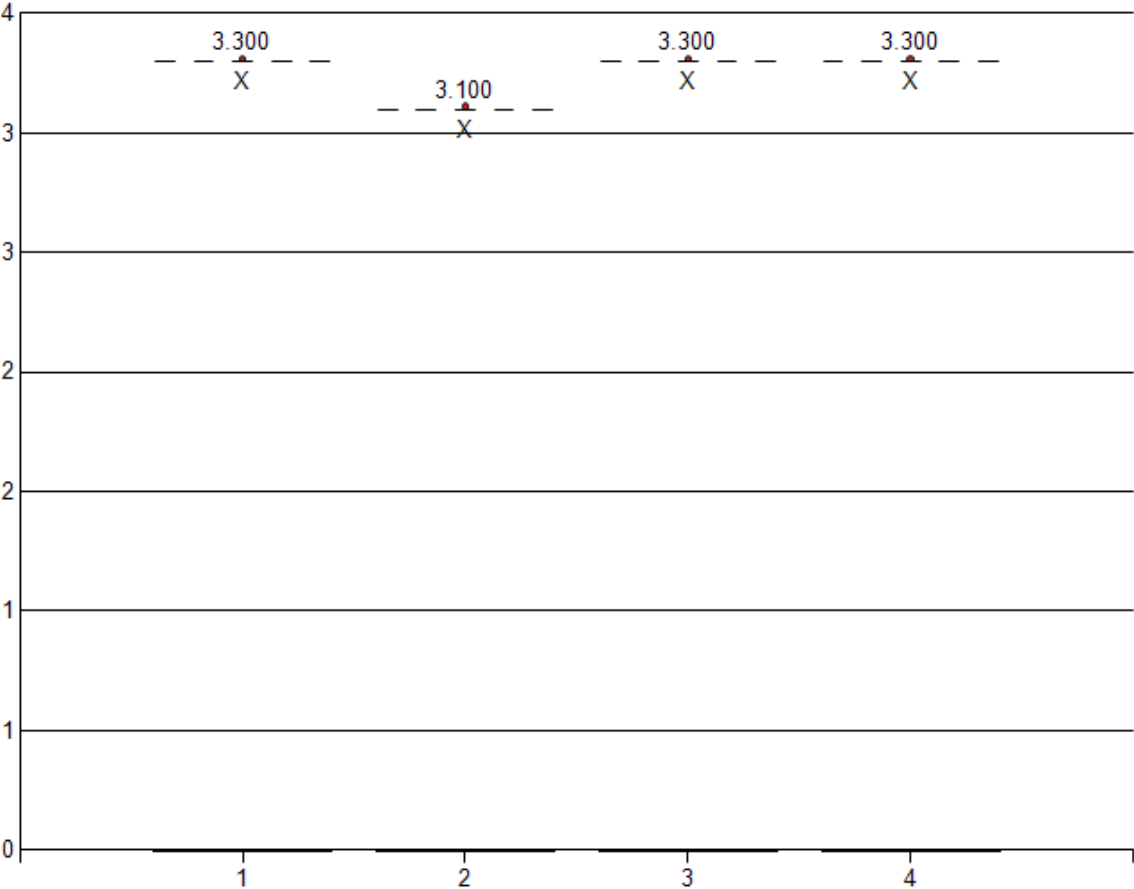
CEC



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

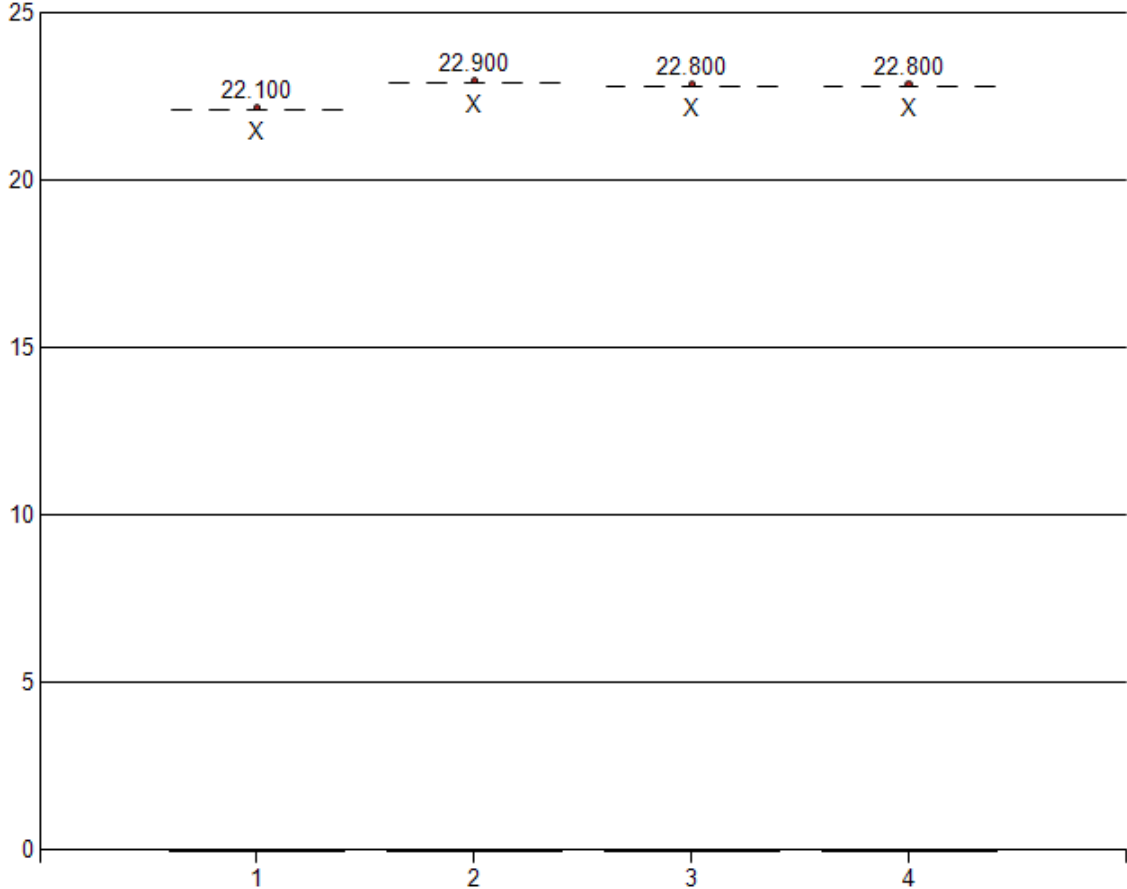
Percent K



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

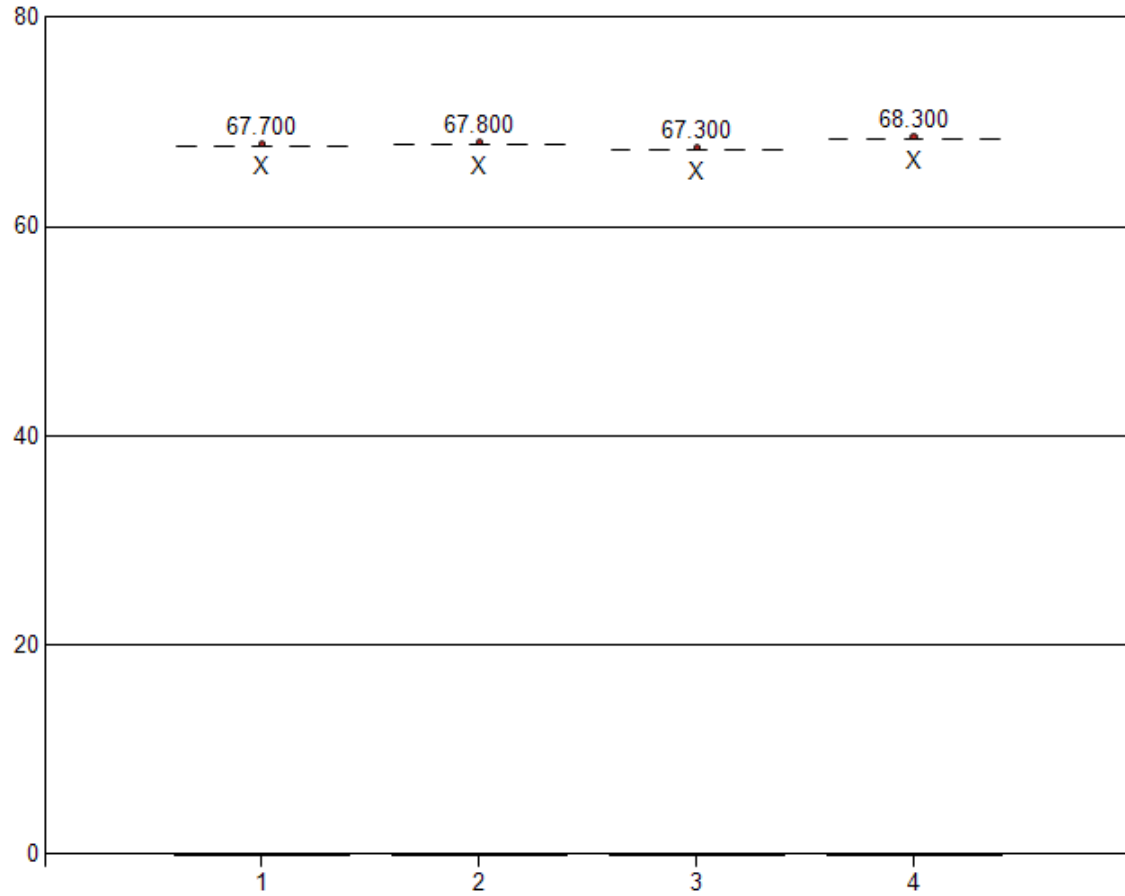
Percent Mg



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

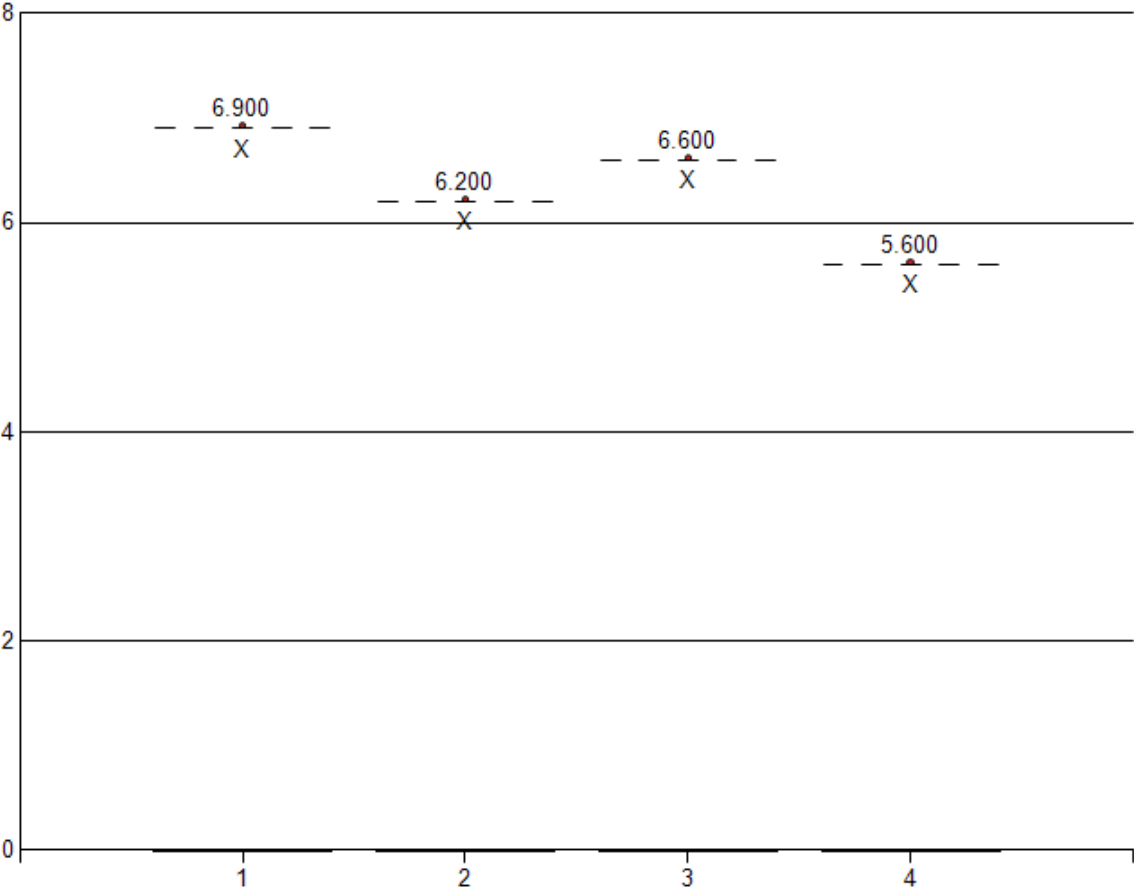
Percent Ca



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

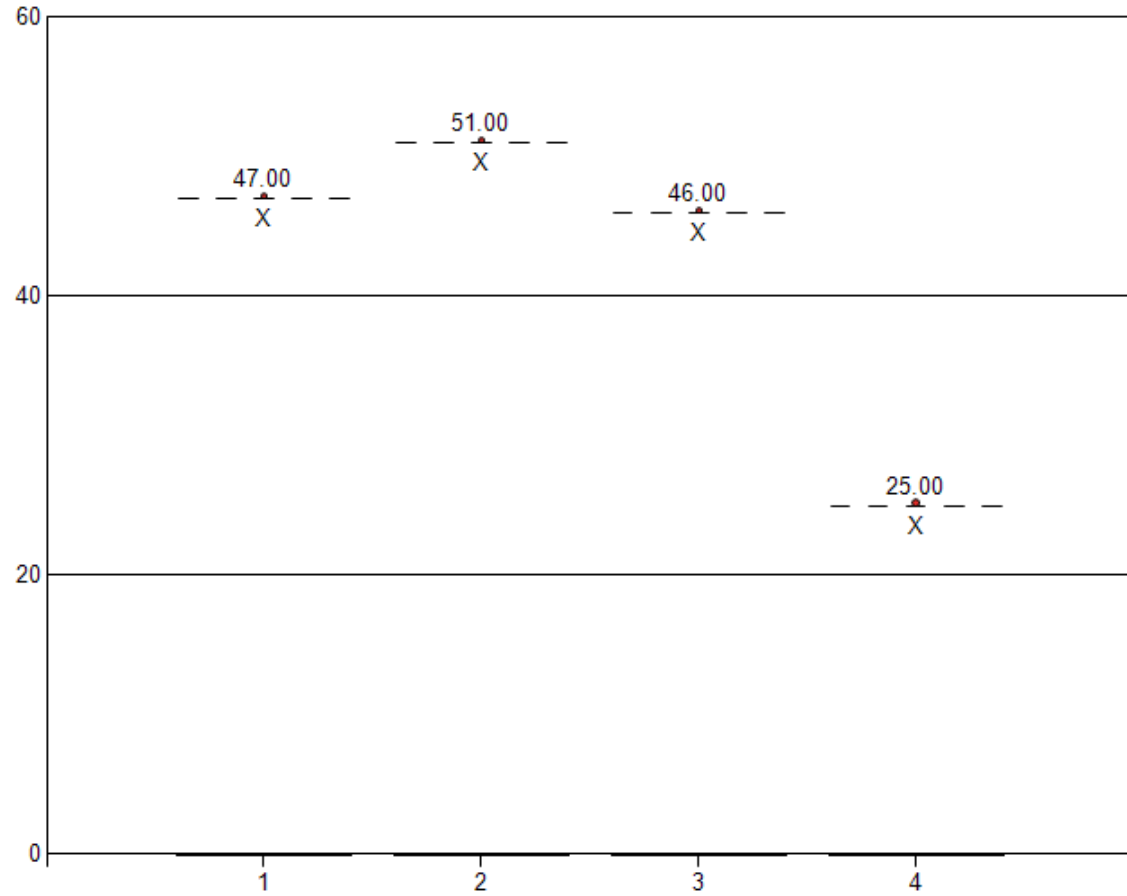
Percent Na



- 1 UTC
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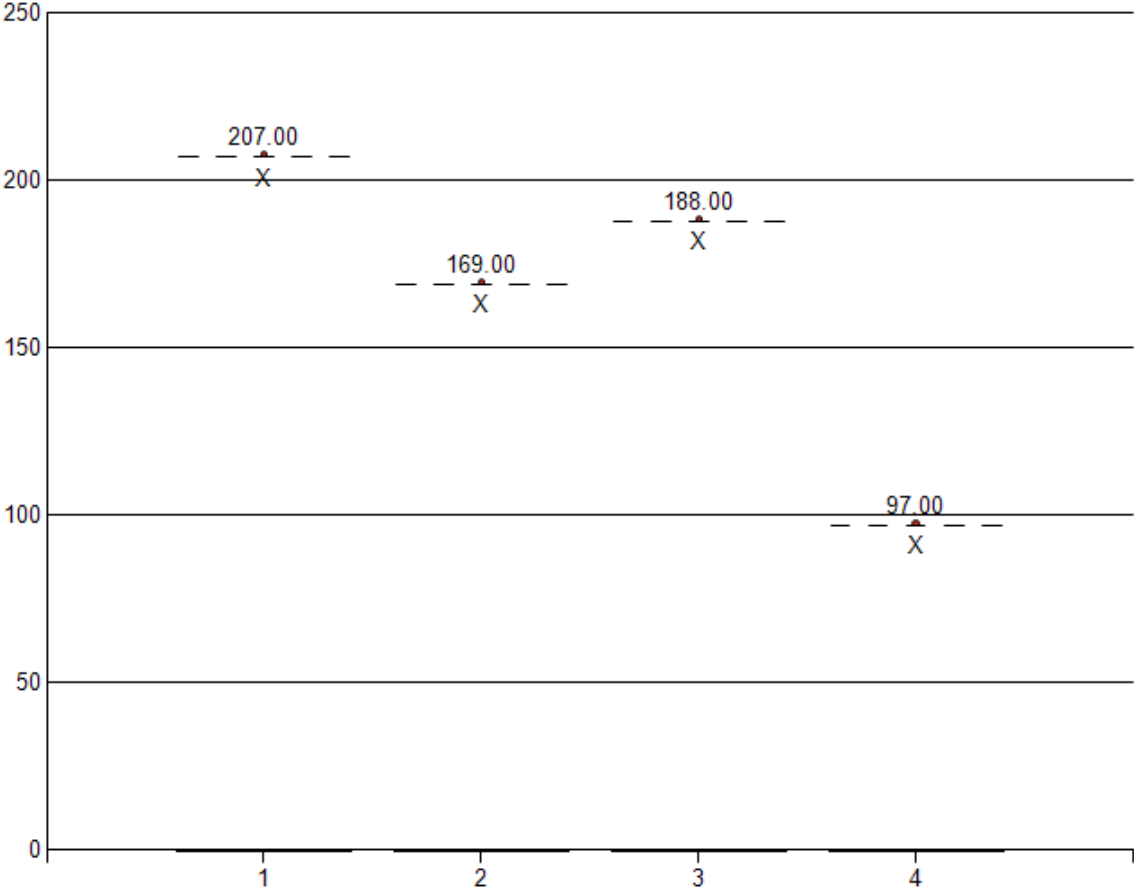
Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples



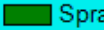

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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

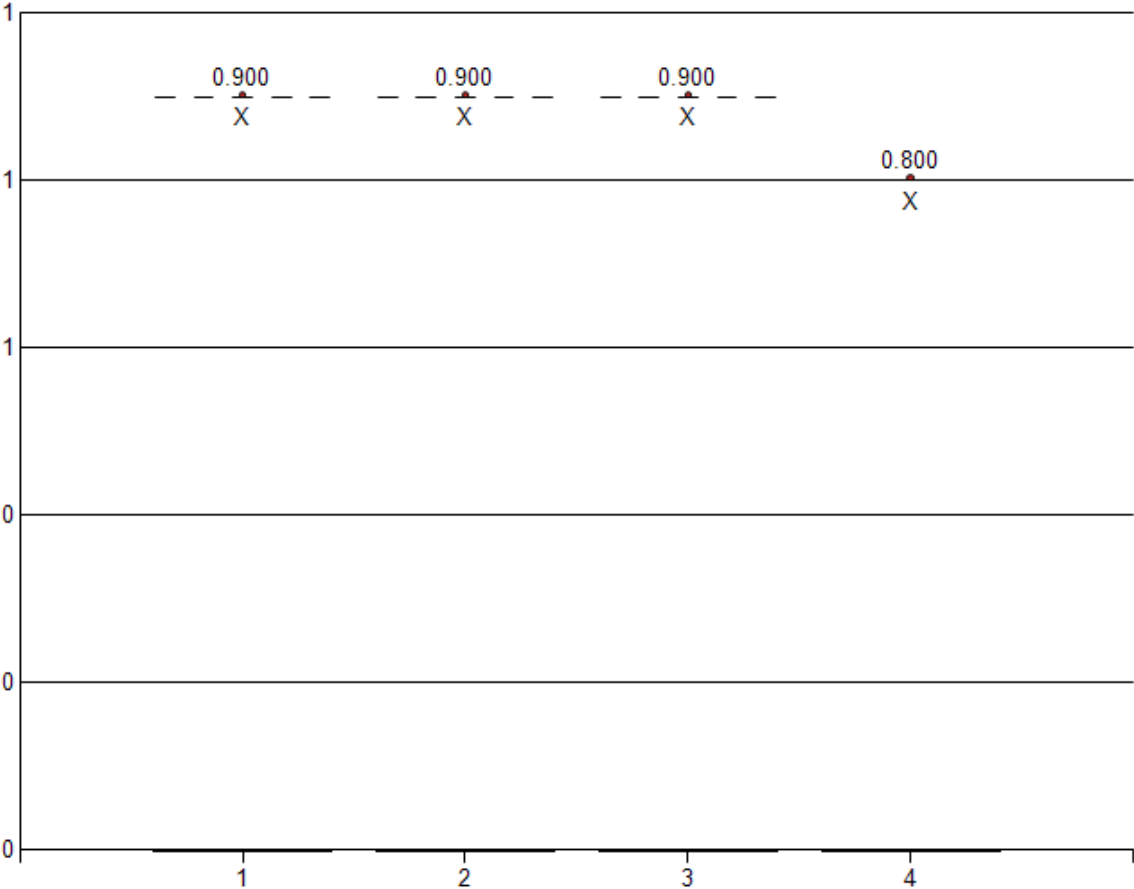


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- 4  Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

S

Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

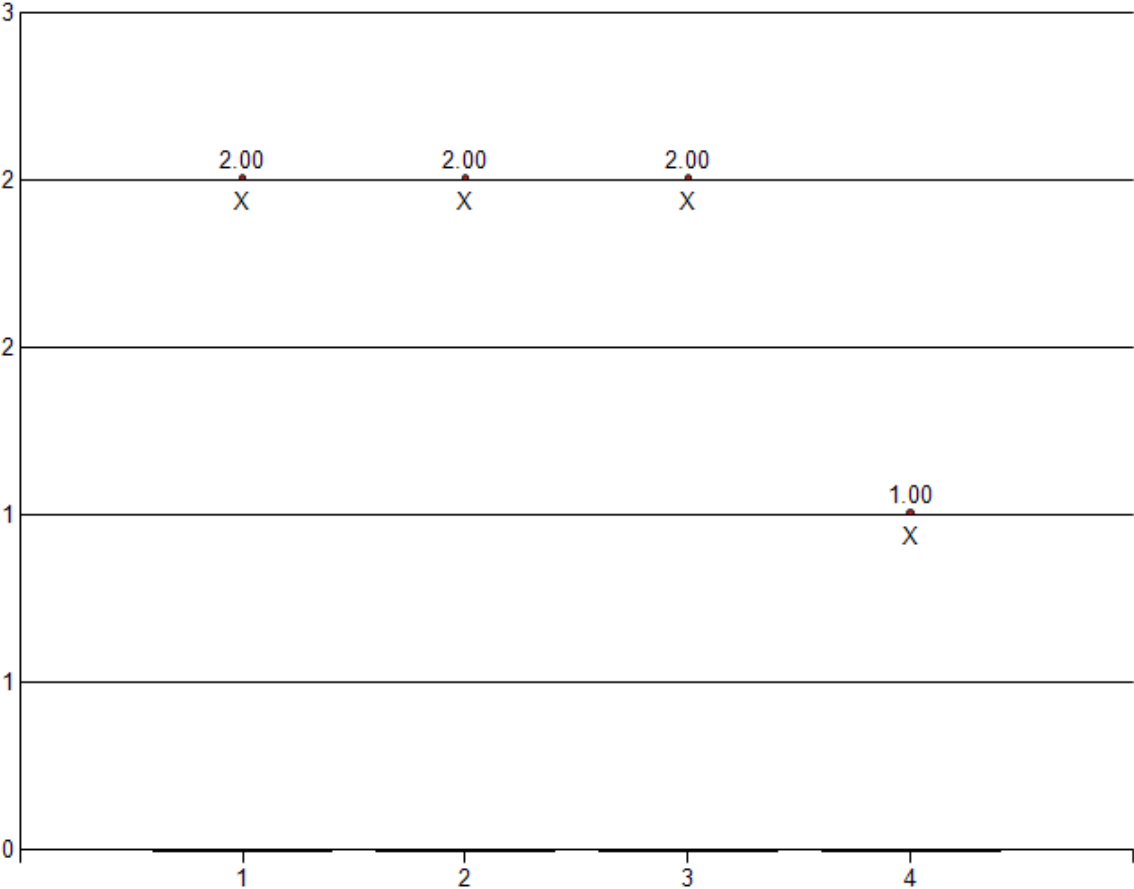
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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

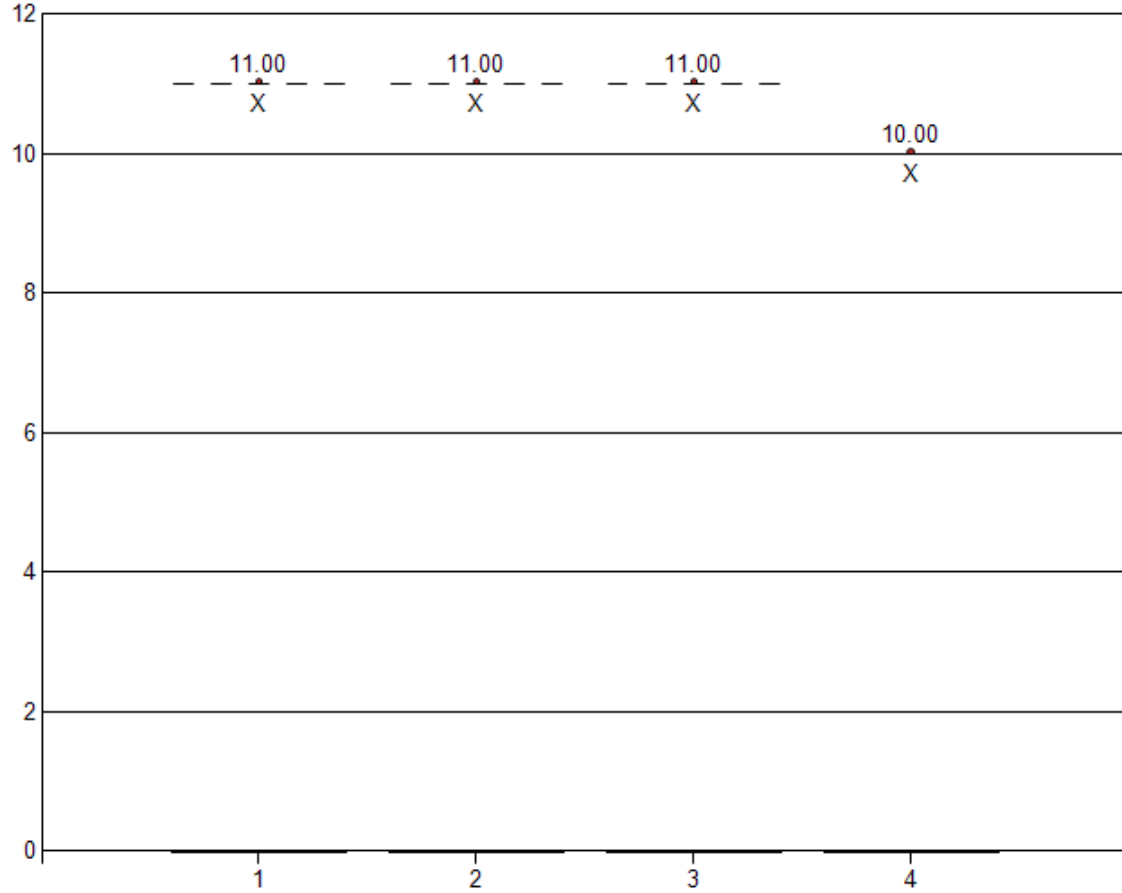
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


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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

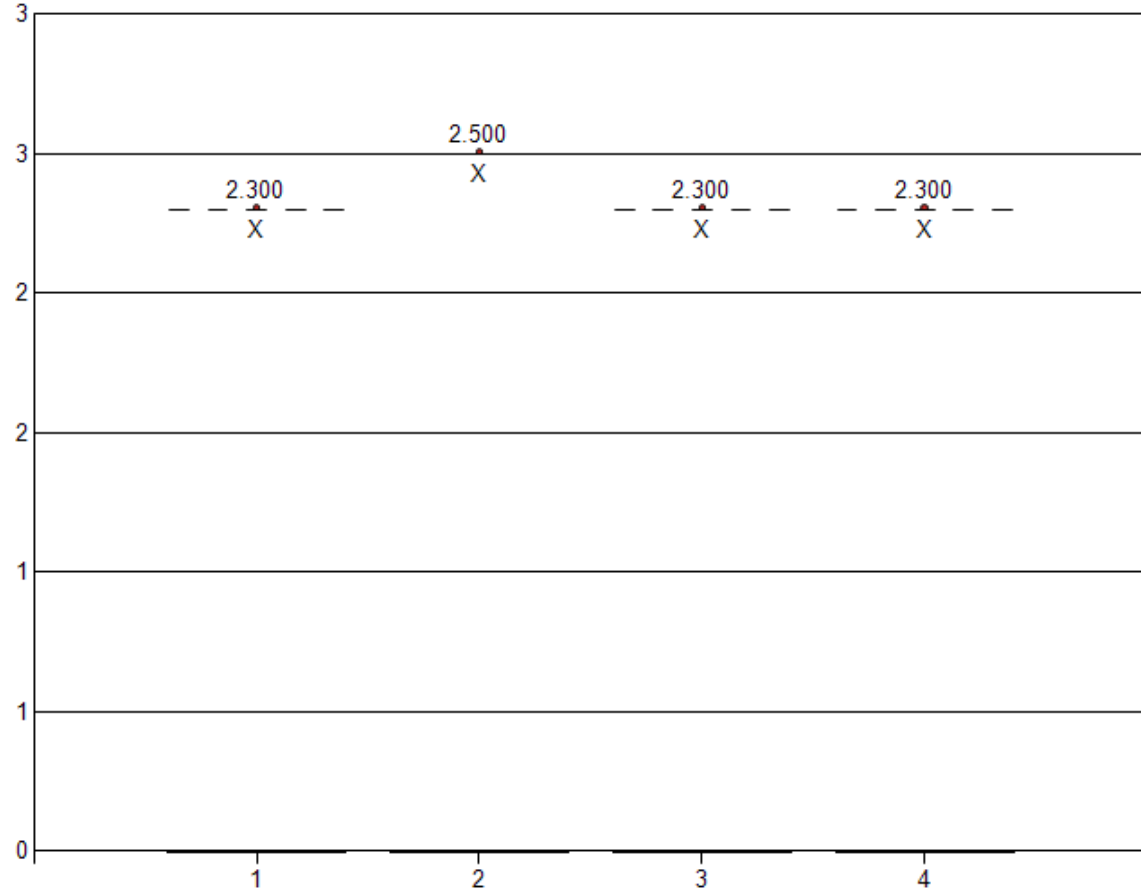
Fe



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

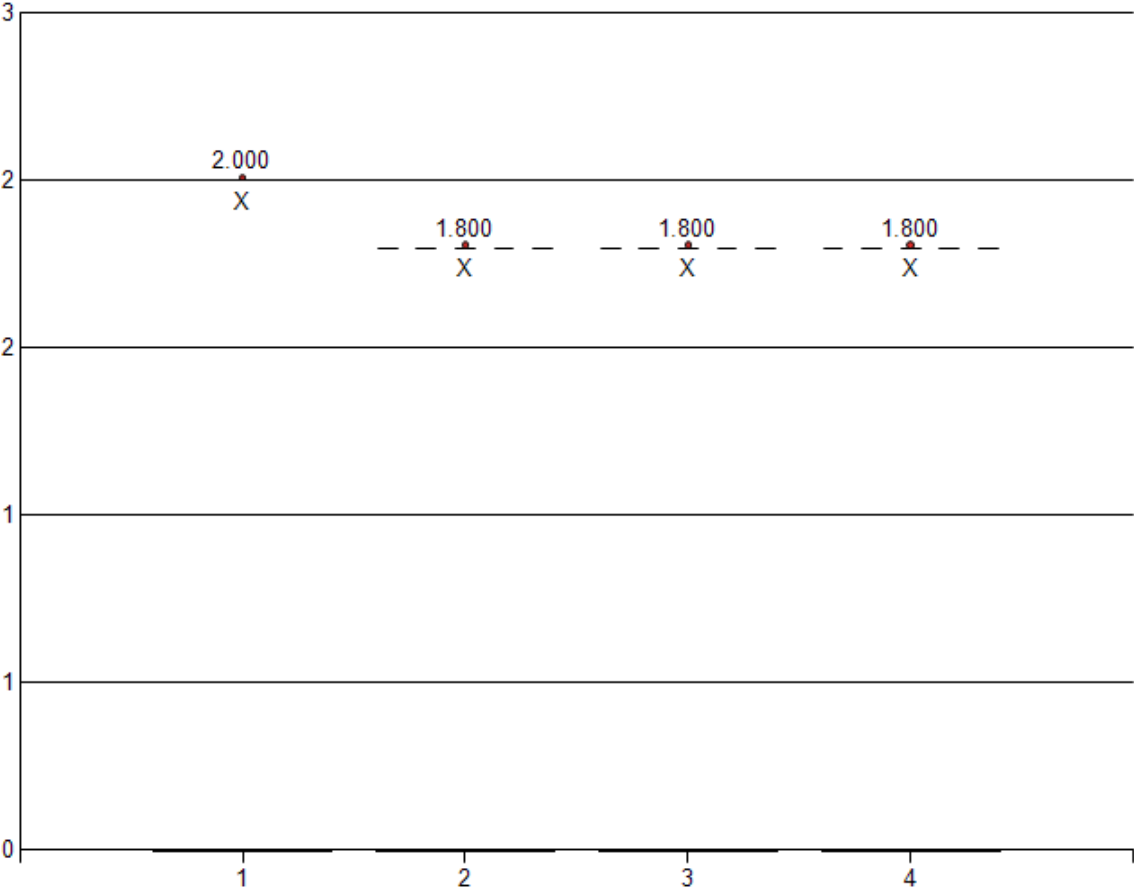
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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

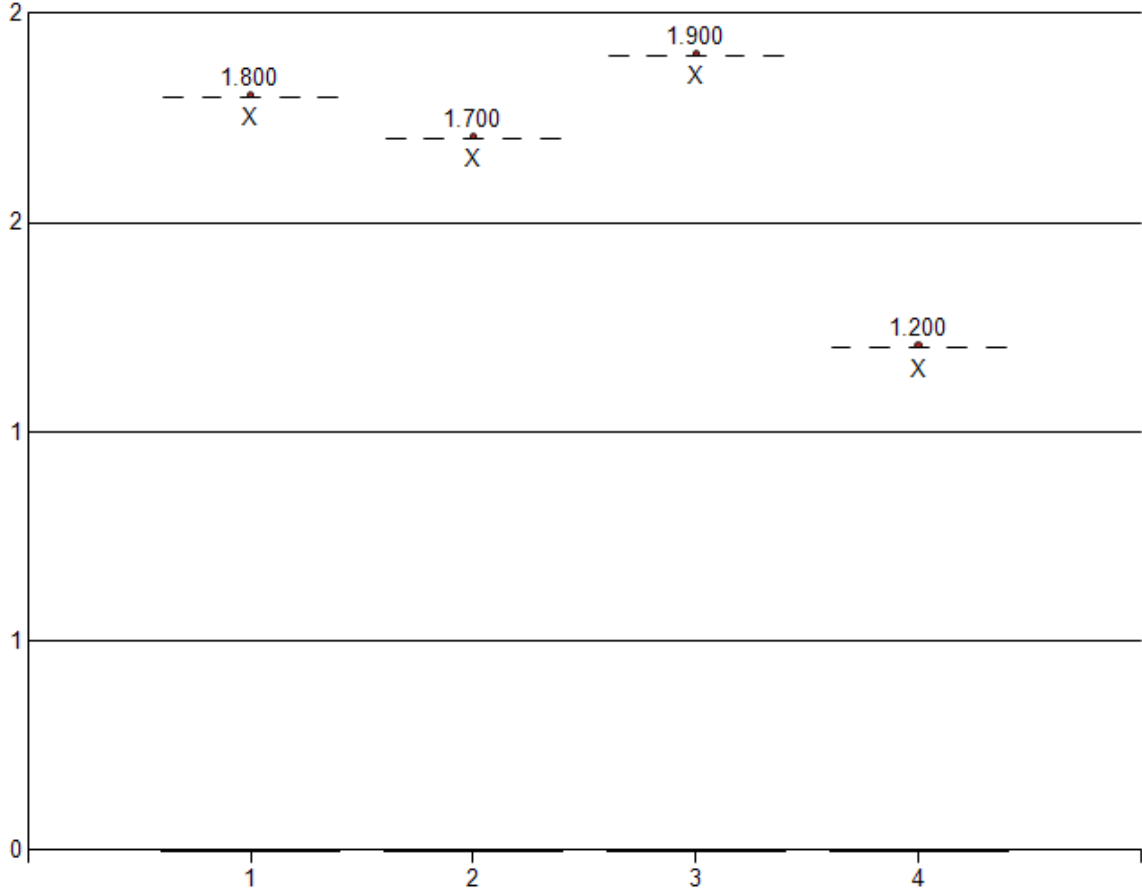
B



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

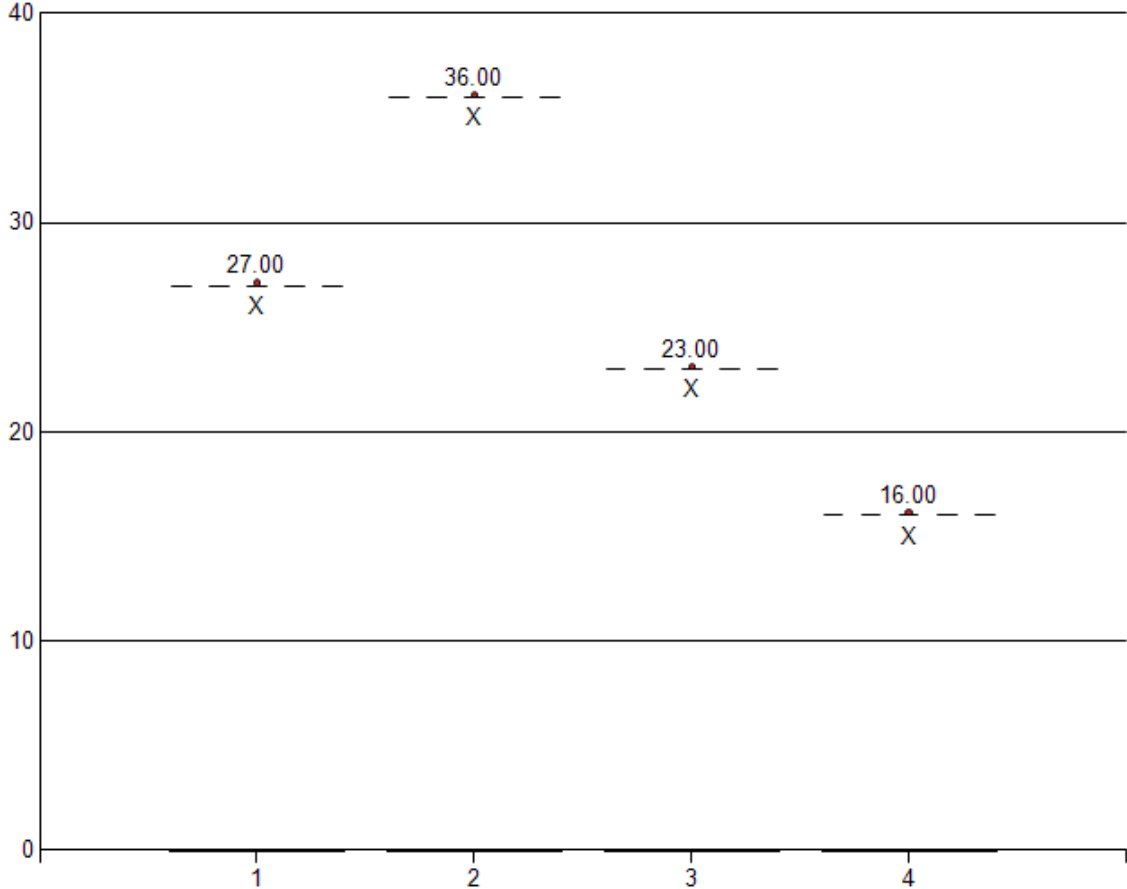
Sol Salts



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Yuma Romaine - Lida - Fall 2025 - End of Season Soil Samples

Bicarb



- 1 UTC
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- 3 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A
- 4 Spray\_Signalin 12 OZ WT/A;Spray\_Calciodid 12 FL OZ/A;Drip\_Rental 16 FL OZ/A

# Plot Photos



Plot - 2501  
Trt - 3



Plot-2601  
Trt-2



Plot-2701  
Trit-1



Plot-2801  
Trt-4



Plot-2502  
Trt-4



Plot-2602  
Trt-1



Plot-2702  
Trt-2



Plot-2802  
Trt-3



Plot-2503  
Trit-2



Plot - 2603  
Trit - 3



Plot-2703  
Trt-4



Plot - 2803  
Trit - 1



Plot-2504  
Trit-1



Plot - 2604  
Trt - 4



Plot-2704  
Trit-2



Plot-2804  
Trt-3



Plot-2505  
Trit-4



P10t-2605  
T1t-1



Plot-2705  
Trit-3



Plot-2805  
Trt-2



Plot-2506  
Trit-3



Plot - 2606  
Trt - 2



Plot - 2706  
Trt - 4



Plot-2806  
Trt-1