



HELENA
PRODUCTS
GROUP

From Data to Decisions: How Industry Sponsors Can Utilize CRO Data

NAICC- Efficacy Research Training

Nick Hurdle



January 26th, 2026



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EVOLVE





Technical Development Manager



Nick Hurdle, PhD

B.S. – Crop and Soil Sciences, UT-Martin

M.S. – Weed Science- University of Georgia

Ph.D. – Weed Science- University of Georgia

Helena – Technical Development Manager





Technical Development Manager

Nick Hurdle, PhD

B.S. – Crop and Soil Sciences, UT-Martin

M.S. – Weed Science- University of Georgia

Ph.D. – Weed Science- University of Georgia

Helena – Technical Development Manager

Develop/contract research protocols for 3rd party researchers

Assist in product development (Concept to Launch)

Assist field personnel with technical product questions

In-house R&D work (storage stability, tank-mixes, Field of Innovation)

Members of numerous Industry Societies (SWSS, ASTM, APS, ASA, ESA, etc...)





Aaron Hert

R&D Manager, Seed treatments



Nick Hurdle

Technical Development
Manager

- Adjuvants
- Soybean herbicides
- Small grain herbicides



Bradley Greer

Technical Development
Manager

- Fungicides
- Corn herbicides
- R&P herbicides
- Specialty



Zachary Ellenburg

R&D Data Analyst

- Database development
- Data analysis
- Statistics consultation



Clay Perkins

Technical Development
Manager

- Insecticides
- Cotton PGR's
- Coron & Nutritionals



Derek Hilfiker

Technical Development
Manager

- Bioscience
- HPG starter fertilizers





Experiment Data Management



1. Data collection methods/remedies
2. Data entry
3. How HPG handles data
4. What do you all need from us?

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Data Collection



Common Data Collection Methods

1. Visual ratings



Data Collection



Common Data Collection Methods

1. Visual ratings
 - Subjective in nature



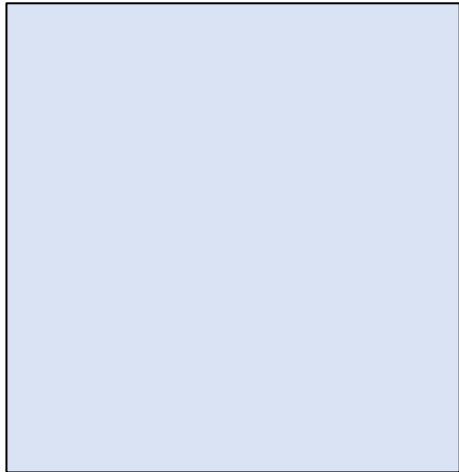
Data Collection



Common Data Collection Methods

1. Visual ratings

- Subjective in nature



Light Blue?
Grey?
White?



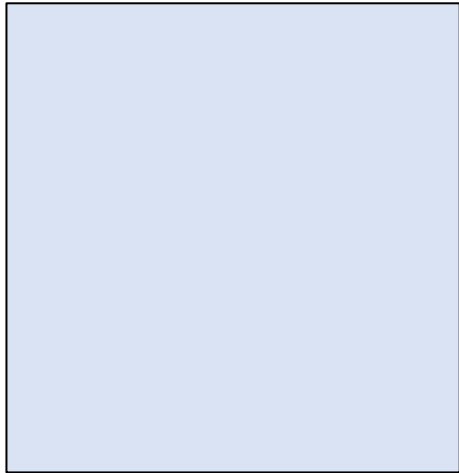
Data Collection



Common Data Collection Methods

1. Visual ratings

- Subjective in nature



Light Blue



Blue



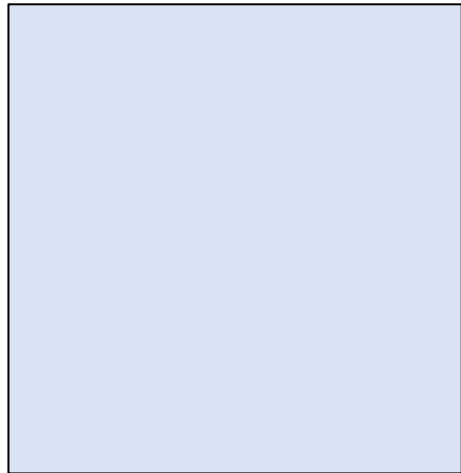
Data Collection



Common Data Collection Methods

1. Visual ratings

- Subjective in nature



Light Blue



Blue



Dark Blue



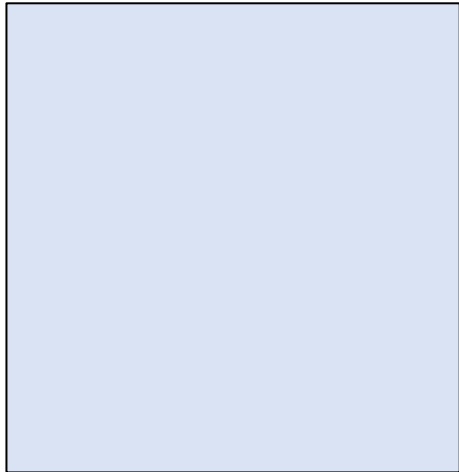
Data Collection



Common Data Collection Methods

1. Visual ratings

- Subjective in nature



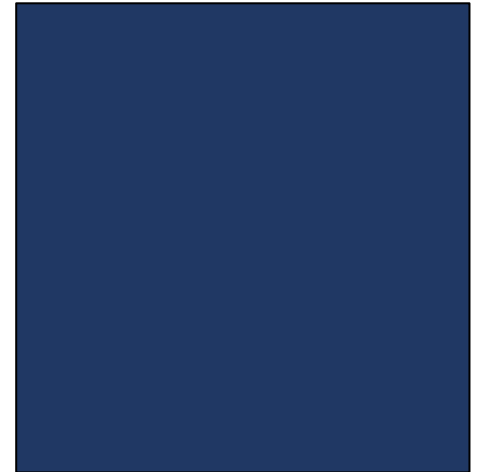
Grey



Light Blue



Blue



Dark Blue



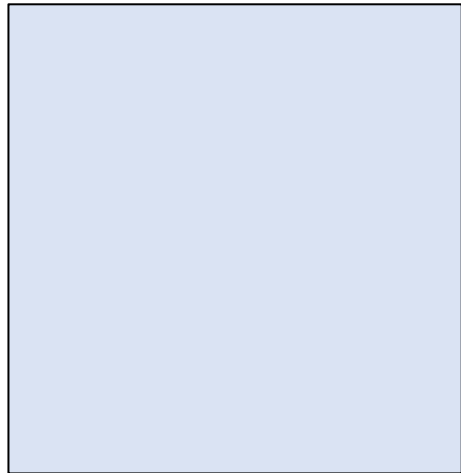
Data Collection



Common Data Collection Methods

1. Visual ratings

- Subjective in nature



Grey



Light Blue



Blue



Dark Blue



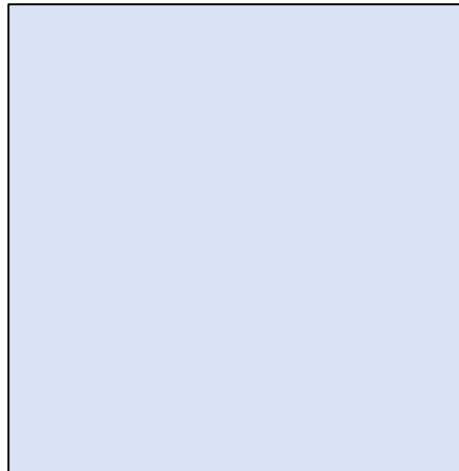
Navy Blue



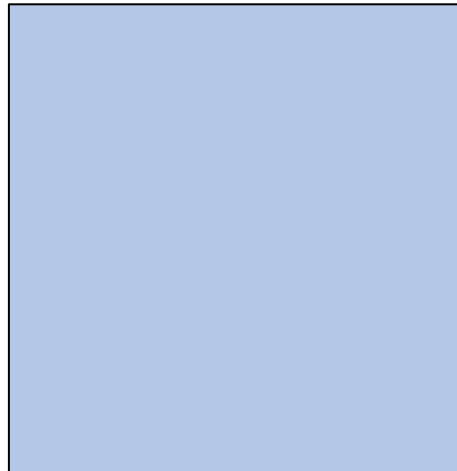
Common Data Collection Methods

1. Visual ratings

- Subjective in nature



1. Light blue/Grey/White
2. Light Blue
3. Grey



1. Light Blue



1. Blue



1. Blue
2. Dark Blue



1. Dark Blue
2. Navy Blue

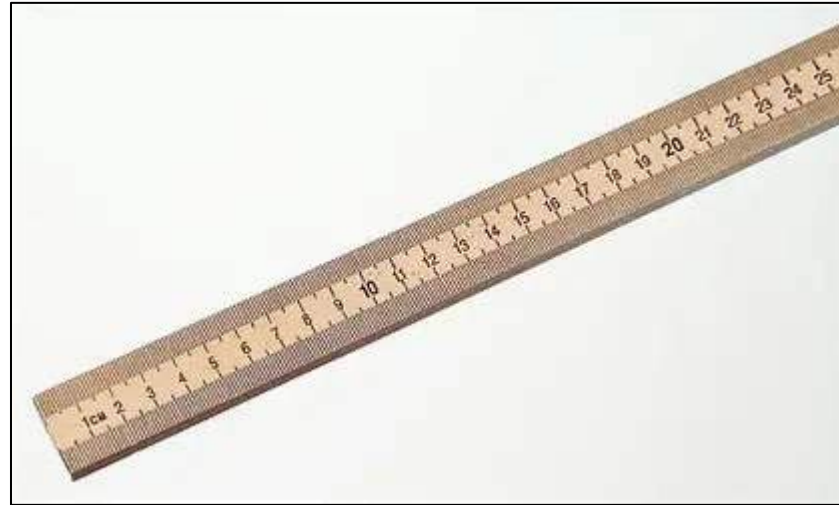


Data Collection



Common Data Collection Methods

2. Hard numbers/physical count



Credit: Xanthe Walker, Univ. of Sask.

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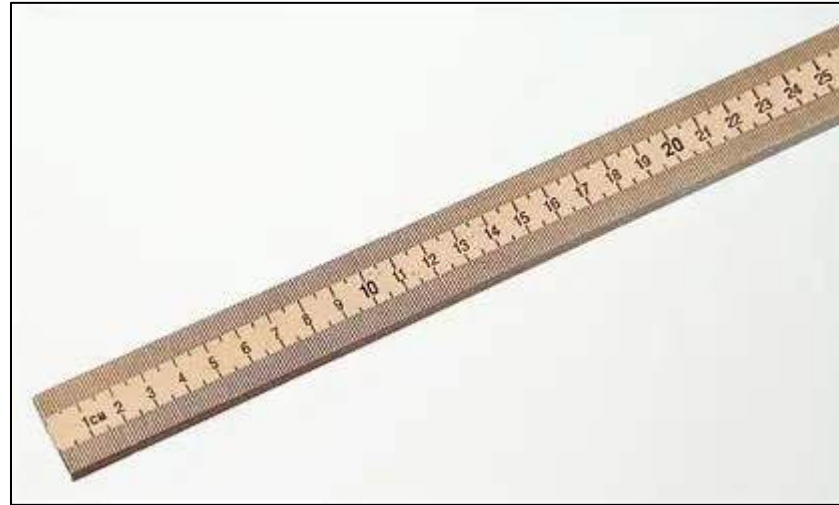
Common Data Collection Methods

2. Hard numbers/physical count

- Go too fast, guesstimate over time, hot/cold spots in plot



Credit: Xanthe Walker, Univ. of Sask.





Data Collection



Common Data Collection Methods

3. Additional recording tools

- Drone, SPAD meter, porometer/fluorometer, light bar, photosynthesis meters, etc...





Data Collection



Common Data Collection Methods

3. Additional recording tools

- Drone, SPAD meter, porometer/fluorometer, light bar, photosynthesis meters, etc...
 - Calibration, flight path, time of day, leaf selection, clean sensors/internal components, seals





Data Collection



Common Data Collection Methods

4. Remedies to ensure accurate data collection

- a) Ensure same person rates the same trials
- b) SLOW DOWN when counting
- c) Ensure rated spot is representative of ENTIRE plot
- d) Calibrate/clean equipment regularly, software updates



Data Collection



Common Data Collection Methods

4. Remedies to ensure accurate data collection

- a) Ensure same person rates the same trials
- b) SLOW DOWN when counting
- c) Ensure rated spot is representative of ENTIRE plot
- d) Calibrate/clean equipment regularly, software updates
- e) Rainy days or slow time, review with crew the rating procedures
- f) Have a second person verify what you rated
- g) Don't use treatment list when rating, but verify Non-Treated Check's if no running checks
- h) Pick areas with consistent pressure, deficiencies, etc...



Experiment Data Management



1. Data collection methods/remedies
2. Data entry

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Data Entry



Data Entry Accuracy

1. Correct trial information

Assessment Data

Assessed By
Rating Date
<input type="checkbox"/> Standard Evaluation (SE)
- SE Name
- SE Description
- Part Rated
- Rating Type
- Rating Unit
- Rating Min/Max/Interval
- Sample Size
- Collection Basis
- Reporting Basis
- Number of Subsamples
<input type="checkbox"/> Crop
- Crop Type, Code
- BBCH Scale
- Crop Scientific Name
- Crop Name
- Crop Variety

<input type="checkbox"/> Pest
- Pest Type
- Pest Code
- Pest Scientific Name
- Pest Name
- Pest Stage Scale
<input type="checkbox"/> Timing
- Days After First/Last Appl.
- Treatment Appl. Interval
- Planting Interval
- Days After Emergence
- Pest Establishment Interval
<input type="checkbox"/> Miscellaneous
- ARM Action Codes
- Number of Decimals
- Data Entry Date

Application/App. Equipment

Date	Jul-30-2025
Start Time	10:05 AM
Stop Time	10:40 AM
Standard	
Method	SPRAY
Timing	ACCRST
Placement	BROFOL
Mixed/Prepared By	
Applied By	
Entry Date	Nov-5-2025
Air Temperature Start, Stop	84 F
% Relative Humidity Start, Stop	78
Wind Velocity+Dir. Start	0 MPH
Wind Velocity+Dir. Stop	
Wind Velocity+Dir. Max	
Wet Leaves (Y/N)	
Soil Temperature	79 F
Soil Temperature Depth	
Soil Moisture	
Soil Surface Condition	

Equipment Name	SPRAYER
Equipment Type	SPRBAC
Operation Pressure	33 PSI
Nozzle Model	TT11002
Nozzle Type	TEEJTU
Nozzle TradeName	TEEJET
Nozzle Tip Size, Color	11002 YELLOW
Nozzle Spacing	20 IN
Nozzles/Row	
Nozzle Count	
Band Width	
Spray Swath	
% Coverage	
Boom ID	
Boom Length	6.7 FT
Boom Height	20 IN
Ground Speed	3 MPH
Carrier	WATER
Water Hardness (ppm CaCO3)	
Application Amount	15 GAL/AC





Data Entry



Data Entry Accuracy

1. Correct trial information

Crop Description

Pest Description

Crop/Variety List

Crop 1: *BBCH Scale: BCOR*

Entry Date: Stage Scale:

Variety:

Attributes:

Seed Shape:

Seed Size:

Perennial Age:

Perennial Height:

Nursery Date:

Planting Date: Planting Rate:

Depth:

Planting Method: *planted*

Rows per Plot:

Planting Equipment: *plot planter*

Row Spacing:

Seed Bed: *medium*

Spacing within Row:

Soil Temperature: Soil Moisture: *normal, adequate*

Emergence Date:

Harvest Date:

Harvest Equipment:

Moisture Meter:

Harvested Width:

% Standard Moisture:

Harvested Length:

Weighing Equipment:

Pest Description
Insert Pest with Shift+F7, Delete current Pest with Shift+F8

Pest 1 Type: Code: *Entry Date: Nov-5-2025*

Common Name: Stage Scale:

Attributes: Artificial Population:

Establishment Date: Time: Stage at Establishment:

Establishment Rate:

Concentration:

Establishment Method/Description:

Crop: Stage at Infestation:



Data Entry



Data Entry Accuracy

1. Correct trial information
2. Correct data entry
 - Numbers are entered accurately
 - Treatments and reps are accurate to data recorded
 - Proper movement through field (numerical order, serpentine, reverse order, etc...)



Data Entry



Data Entry Accuracy

1. Correct trial information
2. Correct data entry
3. Ensure any copy/pasted information is correctly copied/pasted



Taking Notes



1. Take and record notes as they happen

- Whole or half plot rated? Any heavy/light plots? 1 meter of row?
- 0-100 scale, 0-10, 1-5, physical counts
- Who rated and environmental conditions at rating



Taking Notes



1. Take and record notes as they happen
2. Accurate pest rated
 - Verify what you are rating
 - No overall ratings (be species specific)



Taking Notes



1. Take and record notes as they happen
2. Accurate pest rated
3. Any field specific notes
 - Previous crop and applications
 - Poor drainage, nutrient “x” deficiency, low population, rep 4 on old field road



Experiment Data Management



1. Data collection methods/remedies
2. Data entry
3. How HPG handles data

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How HPG handles Data



Assessment Data Tab in ARM

1. Run initial analysis
 - Run according to trial goals



How HPG handles Data

Column 9 does not meet assumptions of AOV: data has skewness/kurtosis

Apply 'Log(n+1)' transformation to correct skewness/kurtosis.

Column 10 does not meet assumptions of AOV: Exclude treatment 11 from analysis to correct skewness/kurtosis.

Column 15 does not meet assumptions of AOV: data has skewness

Apply 'Log(n+1)' transformation to correct skewness.

Column 21 does not meet assumptions of AOV: data has skewness/kurtosis

Apply 'Log(n+1)' transformation to correct skewness/kurtosis.

Column 11 does not meet assumptions of AOV: data has heterogeneity of variance/skewness/kurtosis

Apply 'Log(n+1)' transformation to correct heterogeneity of variance.

Column 7 does not meet assumptions of AOV: data has skewness

Apply 'Arcsine square root percent' transformation to correct skewness.

Column 12 does not meet assumptions of AOV: data has heterogeneity of variance/skewness

Apply 'Arcsine square root percent' transformation to correct heterogeneity of variance/skewness.

Column 8 does not meet assumptions of AOV: data has heterogeneity of variance

Apply 'Arcsine square root percent' transformation to correct heterogeneity of variance.

Column 13 does not meet assumptions of AOV: Exclude treatment 2 from analysis to correct heterogeneity of variance/skewness.

Column 24 does not meet assumptions of AOV: Exclude replicate 1 to correct skewness/kurtosis.

Column 11 does not meet assumptions of AOV: data has heterogeneity of variance/skewness/kurtosis

The assessment column failed Levene's test for homogeneity, and thus violates the AOV assumption of homogeneity of variance.

This is typically solved by either applying a data transformation or excluding from analysis the problem treatment(s).

Use Tools - Transform to apply a Log, Square Root, or Arcsine Square Root Percent transformation.

Column 12 does not meet assumptions of AOV: data has heterogeneity of variance/skewness

Column 8 does not meet assumptions of AOV: data has heterogeneity of variance

Column 13 does not meet assumptions of AOV: data has heterogeneity of variance/skewness

11 of 24 columns had some type of issue



How HPG handles Data



Assessment Data Tab in ARM

1. Identify Outliers

- Have ARM identify outliers
 - Greater than 2 or 3 std. dev.

Column 3 Properties	
Previous Next	
Column Flags:	Original
Min/Max entry:	0 100
Low/High value:	10.7 12
Descriptive Statistics Refresh	
LSD P=.05:	0.183
Standard Deviation:	0.123
CV:	1.093
Grand Mean:	11.27
Levene's Prob(F)	0.94
P(Friedman's X2):	0.17
Skewness:	0.2079
Kurtosis:	0.7073
Replicate Prob(F):	0.3413
Treatment Prob(F):	0.0032
Outliers	
<input type="radio"/>	> +/- 3 standard deviations from grand mean
<input checked="" type="radio"/>	> +/- 2 standard deviations from grand mean
<input type="radio"/>	Box-Whisker
<input type="checkbox"/>	Skip excluded assessments
<input type="checkbox"/>	Based on subsample values
Find Next	



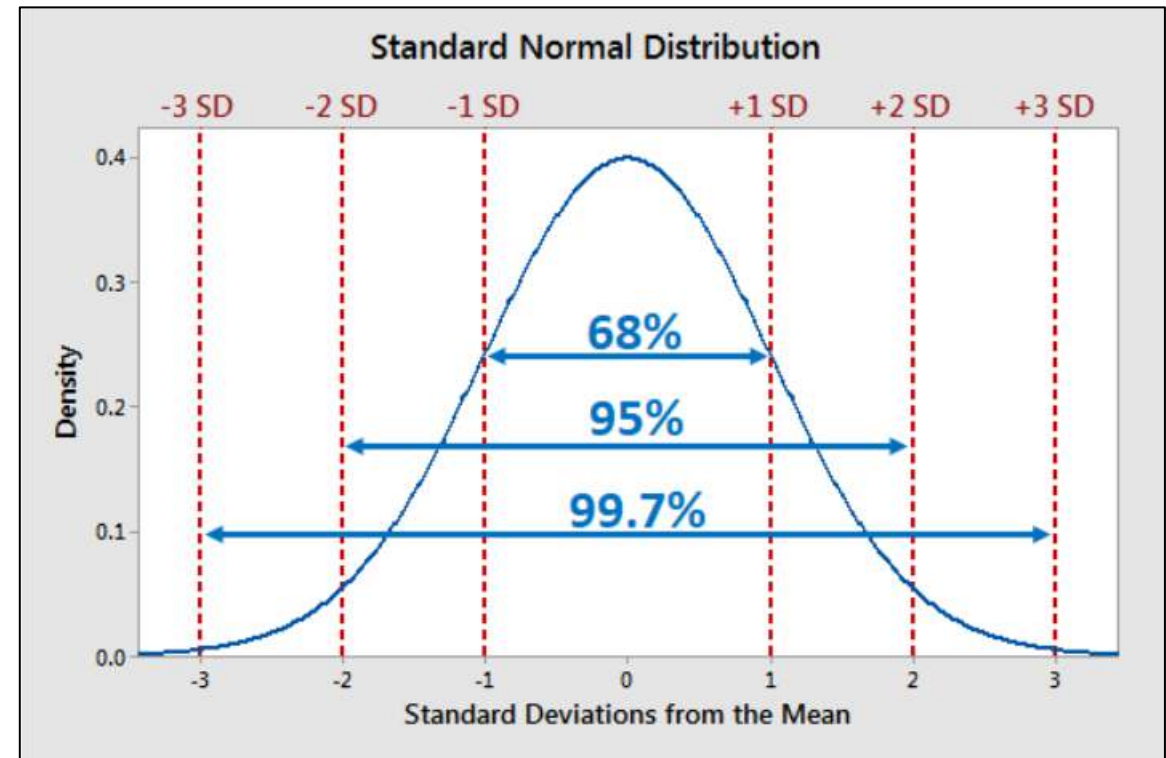


How HPG handles Data

Assessment Data Tab in ARM

1. Identify Outliers

- Have ARM identify outliers
 - Greater than 2 or 3 std. dev.
 - Empirical Rule





How HPG handles Data



Assessment Data Tab in ARM

1. Identify Outliers

- Have ARM identify outliers
- Identify them yourself
 - Sort by treatment
 - Keep at least 3 reps per trt
 - More for biological trials

<i>Sub</i>	<i>Rep</i>	<i>Blk</i>	<i>Col</i>	<i>Plot</i>	<i>Trt</i>	
1	4	4	4	404	3	8
1	1	1	4	104	4	2
1	2	2	11	211	4	10
1	3	3	9	309	4	8
1	4	4	1	401	4	8
1	1	1	5	105	5	2
1	2	2	10	210	5	8
1	3	3	7	307	5	5
1	4	4	2	402	5	8



How HPG handles Data



Assessment Data Tab in ARM

1. Identify Outliers

- Have ARM identify outliers
- Identify them yourself
 - Sort by treatment
 - Keep at least 3 reps per trt
 - More for biological trials

<i>Sub</i>	<i>Rep</i>	<i>Blk</i>	<i>Col</i>	<i>Plot</i>	<i>Trt</i>	<i>Trt</i>
1	4	4	4	404	3	8
1	1	1	4	104	4	2
1	2	2	11	211	4	10
1	3	3	9	309	4	8
1	4	4	1	401	4	8
1	1	1	5	105	5	2
1	2	2	10	210	5	8
1	3	3	7	307	5	5
1	4	4	2	402	5	8



How HPG handles Data

Column 9 does not meet assumptions of AOV: data has skewness/kurtosis

Apply 'Log(n+1)' transformation to correct skewness/kurtosis.

Column 10 does not meet assumptions of AOV: Exclude treatment 11 from analysis to correct skewness/kurtosis.

Column 15 does not meet assumptions of AOV: data has skewness

Apply 'Log(n+1)' transformation to correct skewness.

Column 21 does not meet assumptions of AOV: data has skewness/kurtosis

Apply 'Log(n+1)' transformation to correct skewness/kurtosis.

Column 11 does not meet assumptions of AOV: data has heterogeneity of variance/skewness/kurtosis

Apply 'Log(n+1)' transformation to correct heterogeneity of variance.

Column 7 does not meet assumptions of AOV: data has skewness

Apply 'Arcsine square root percent' transformation to correct skewness.

Column 12 does not meet assumptions of AOV: data has heterogeneity of variance/skewness

Apply 'Arcsine square root percent' transformation to correct heterogeneity of variance/skewness.

Column 8 does not meet assumptions of AOV: data has heterogeneity of variance

Apply 'Arcsine square root percent' transformation to correct heterogeneity of variance.

Column 13 does not meet assumptions of AOV: Exclude treatment 2 from analysis to correct heterogeneity of variance/skewness.

Column 24 does not meet assumptions of AOV: Exclude replicate 1 to correct skewness/kurtosis.

Column 11 does not meet assumptions of AOV: data has heterogeneity of variance/skewness/kurtosis

The assessment column failed Levene's test for homogeneity, and thus violates the AOV assumption of homogeneity of variance.

This is typically solved by either applying a data transformation or excluding from analysis the problem treatment(s).

Use Tools - Transform to apply a Log, Square Root, or Arcsine Square Root Percent transformation.

Column 12 does not meet assumptions of AOV: data has heterogeneity of variance/skewness

Column 8 does not meet assumptions of AOV: data has heterogeneity of variance

Column 13 does not meet assumptions of AOV: data has heterogeneity of variance/skewness

11 of 24 columns had some type of issue



How HPG handles Data



Assessment Data Tab in ARM

Column 7 does not meet assumptions of AOV: data has skewness

Apply 'Arcsine square root percent' transformation to correct skewness.

1 of 24 columns had an issue

Perform transformations if
outliers can no longer be
removed (3 data points/trt)



How HPG handles Data



17 Errors

- Errors
 - Column 10 does not meet assumptions of AOV: data has heterogeneity of variance/skewness
Apply 'Log(n+1)' transformation to correct heterogeneity of variance/skewness.
 - Column 13 does not meet assumptions of AOV: Exclude replicate 4 to correct skewness.
 - Column 19 does not meet assumptions of AOV: data has heterogeneity of variance/skewness
Apply 'Arcsine square root percent' transformation to correct heterogeneity of variance/skewness.
 - Column 24 does not meet assumptions of AOV: Exclude treatment 4 from analysis to correct skewness/kurtosis.
 - Column 29 does not meet assumptions of AOV: Exclude treatment 8 from analysis to correct skewness/kurtosis.
 - Column 5 does not meet assumptions of AOV: data has skewness
Apply 'Arcsine square root percent' transformation to correct skewness.
 - Column 12 does not meet assumptions of AOV: data has skewness
Apply 'Arcsine square root percent' transformation to correct skewness.
 - Column 18 does not meet assumptions of AOV: data has skewness
Apply 'Arcsine square root percent' transformation to correct skewness.
 - Column 23 does not meet assumptions of AOV: data has skewness
Apply 'Arcsine square root percent' transformation to correct skewness.
 - Column 28 does not meet assumptions of AOV: data has skewness
Apply 'Arcsine square root percent' transformation to correct skewness.
 - Column 7 does not meet assumptions of AOV: Exclude treatment 3 from analysis to correct heterogeneity of variance/skewness/kurtosis.
 - Column 16 does not meet assumptions of AOV: Exclude treatment 3 from analysis to correct heterogeneity of variance/skewness/kurtosis.
 - Column 21 does not meet assumptions of AOV: data has skewness/kurtosis
Apply 'Arcsine square root percent' transformation to correct kurtosis.
 - Column 26 does not meet assumptions of AOV: data has skewness/kurtosis
Apply 'Arcsine square root percent' transformation to correct kurtosis.
 - Column 4 does not meet assumptions of AOV: Exclude treatment 3 from analysis to correct skewness/kurtosis.
 - Column 11 does not meet assumptions of AOV: Exclude treatment 3 from analysis to correct skewness/kurtosis.
 - Column 17 does not meet assumptions of AOV: Exclude treatment 3 from analysis to correct skewness/kurtosis.
 - Column 10 does not meet assumptions of AOV: data has heterogeneity of variance/skewness
The assessment column failed Levene's test for homogeneity, and thus violates the AOV assumption of homogeneity of variance.
This is typically solved by either applying a data transformation or excluding from analysis the problem treatment(s).
Use Tools - Transform to apply a Log, Square Root, or Arcsine Square Root Percent transformation.
 - Column 19 does not meet assumptions of AOV: data has heterogeneity of variance/skewness
 - Column 7 does not meet assumptions of AOV: data has heterogeneity of variance/skewness/kurtosis
 - Column 16 does not meet assumptions of AOV: data has heterogeneity of variance/skewness/kurtosis



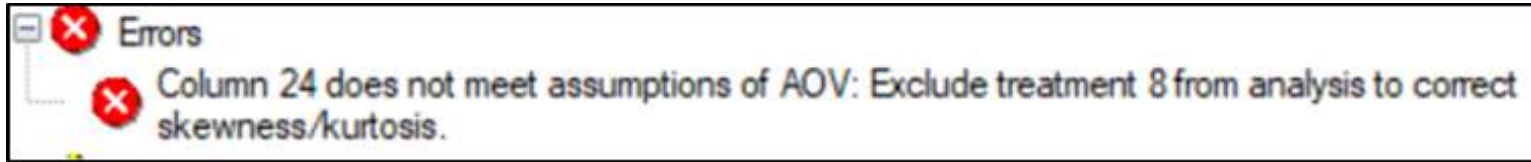
How HPG handles Data

8 Errors

- Errors
 - Column 10 does not meet assumptions of AOV: data has skewness
Apply 'Log(n+1)' transformation to correct skewness.
 - Column 24 does not meet assumptions of AOV: Exclude treatment 8 from analysis to correct skewness/kurtosis.
 - Column 29 does not meet assumptions of AOV: data has skewness/kurtosis
Apply 'Arcsine square root percent' transformation to correct kurtosis.
 - Column 5 does not meet assumptions of AOV: data has skewness
Apply 'Arcsine square root percent' transformation to correct skewness.
 - Column 18 does not meet assumptions of AOV: Exclude treatment 5 from analysis to correct skewness.
 - Column 7 does not meet assumptions of AOV: data has skewness
Apply 'Arcsine square root percent' transformation to correct skewness.
 - Column 16 does not meet assumptions of AOV: data has skewness
Apply 'Arcsine square root percent' transformation to correct skewness.
 - Column 26 does not meet assumptions of AOV: data has heterogeneity of variance/skewness/kurtosis
Apply 'Square Root(n+.5)' transformation to correct heterogeneity of variance.



How HPG handles Data



1 Error that can't be fixed



How HPG handles Data



Assessment Data Tab in ARM

2. Heat Map/Assessment Map

- Shows any field issues not recognized by sight alone
- Can look back at field history and diagnose
- Visual representation for treatments
- Visual representation for ranges

The screenshot displays the HPG software interface. On the left, the 'Column 1 Properties' panel shows various statistical values for a column, including 'Column Flags: Original', 'Min/Max entry: 0 1', 'Low/High value: 0.55 0.74', and 'Descriptive Statistics' such as 'LSD P=.05: 0.0424', 'Standard Deviation: 0.0293', 'CV: 4.7122', 'Grand Mean: 0.62', 'Levene's Prob(F): 0.463', 'P(Friedman's X2): 0.561', 'Skewness: 0.1188', 'Kurtosis: -0.3524', 'Replicate Prob(F): 0.0001', and 'Treatment Prob(F): 0.4356'. Below these are 'Outliers' options, with '> +/- 2 standard deviations from grand mean' selected. A 'Find Next' button is at the bottom of this panel.

On the right, the 'Properties' panel is visible. It includes an 'Assessment View' section with 'View Options...', 'Visible Col 19/19', and a 'Refresh' button. Below this is a 'Hidden Fields' section with checkboxes for 'Rating Time', 'SE Group No.', 'Required', 'Untreated Rating', and 'Calculation'. The 'Views' section lists several options, including 'Original', 'All fields', 'Hidden fields with information', 'Hide empty fields', 'Required/Recommended fields', 'Default - All visible', 'Default - Brief fields visible', 'Default - Fertilizer fields visible', 'Default - Non-pest fields visible', and 'Default - Tablet Data Entry'. The 'Tools' section contains 'AOV Means Table', 'Box-Whisker', and 'Assessment Map' (highlighted with a yellow box), along with a 'Merge from Study...' button. At the bottom, there is an 'Assessment' section with a 'Comment:' text area, 'Barcode:', 'GPS:' fields, and an 'Image:' section with 'Attach', 'Remove', and 'Rename' buttons. A 'Display current treatment' checkbox is also present.

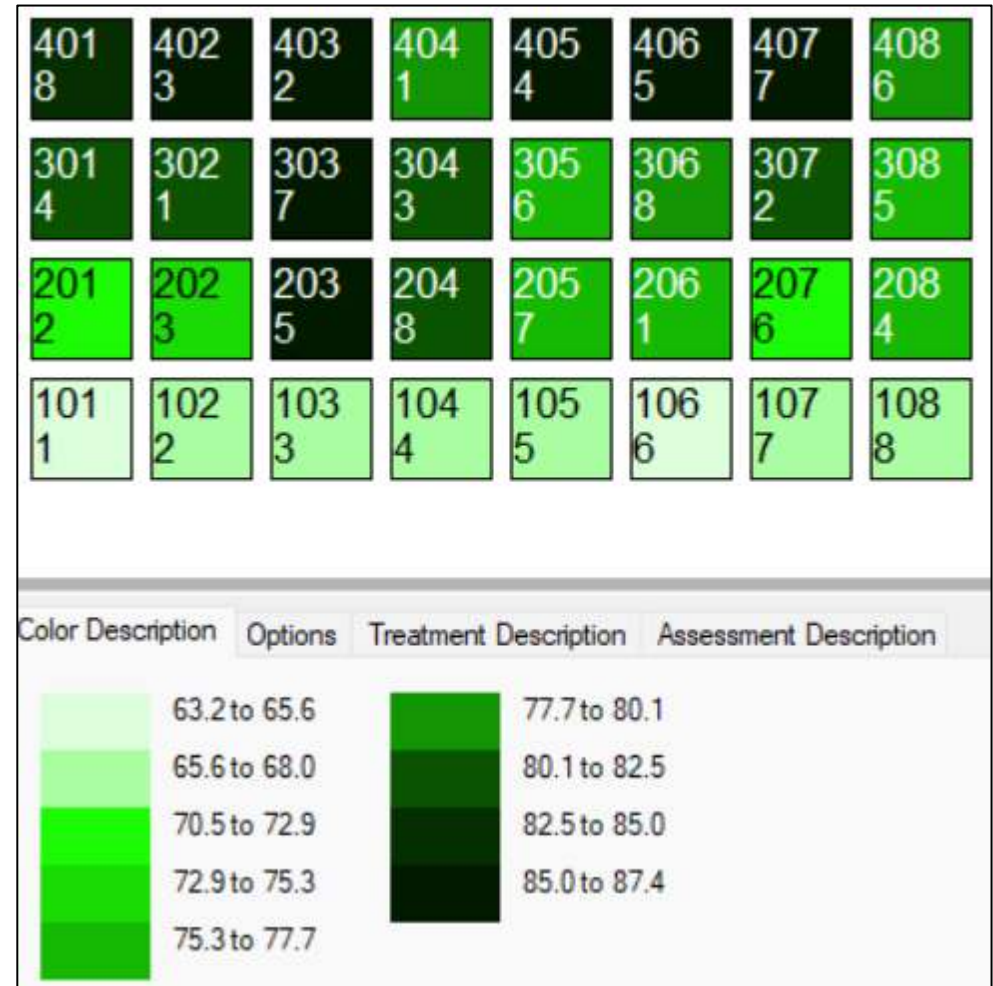


How HPG handles Data

Assessment Data Tab in ARM

2. Heat Map/Assessment Map

- Shows any field issues not recognized by sight alone
- Can look back at field history and diagnose
- Visual representation for treatments
- Visual representation for ranges





How HPG handles Data

Assessment Data Tab in ARM

3. Box and Whisker Plot

The screenshot displays the HPG software interface with two main panels: 'Column 1 Properties' and 'Properties'.

Column 1 Properties:

- Previous: [Button] Next: [Button]
- Column Flags: Original
- Min/Max entry: 0 | 1
- Low/High value: 0.55 | 0.74
- Descriptive Statistics: Refresh [Button]
- LSD P=.05: 0.0424
- Standard Deviation: 0.0293
- CV: 4.7122
- Grand Mean: 0.62
- Levene's Prob(F): 0.463
- P(Friedman's X2): 0.561
- Skewness: 0.1188
- Kurtosis: -0.3524
- Replicate Prob(F): 0.0001
- Treatment Prob(F): 0.4356
- Outliers:
 - > +/- 3 standard deviations from grand mean
 - > +/- 2 standard deviations from grand mean
 - Box-Whisker
- Skip excluded assessments
- Based on subsample values
- Find Next [Button]

Properties:

- Assessment View: View Options... [Button]
- Visible Col 19/19
- Refresh [Button]
- Hidden: Row
- Views: Original, All fields, Hidden fields with information, Hide empty fields, Required/Recommended fields, Default - All visible, Default - Brief fields visible, Default - Fertilizer fields visible, Default - Non-pest fields visible, Default - Tablet Data Entry
- Tools:
 - AOV Means Table [Button]
 - Box-Whisker [Button]** (highlighted)
 - Assessment Map [Button]
 - Merge from Study... [Button]
- Assessment:
 - Comment: [Text Area]
 - Barcode: [Text Field]
 - GPS: [Text Field]
 - Exclude Image: [Text Field]
 - Attach [Button]
 - Remove [Button]
 - Rename [Button]
 - Display by treatment

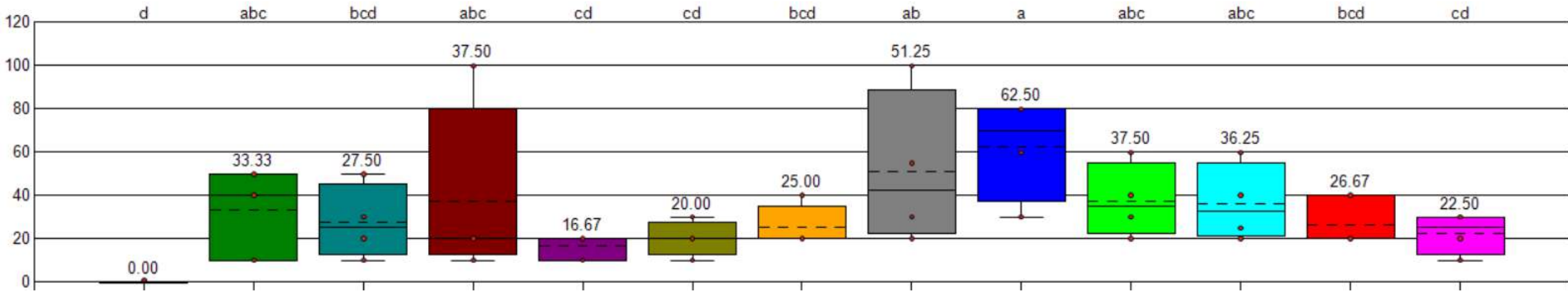


How HPG handles Data



Assessment Data Tab in ARM

3. Box and Whisker Plot



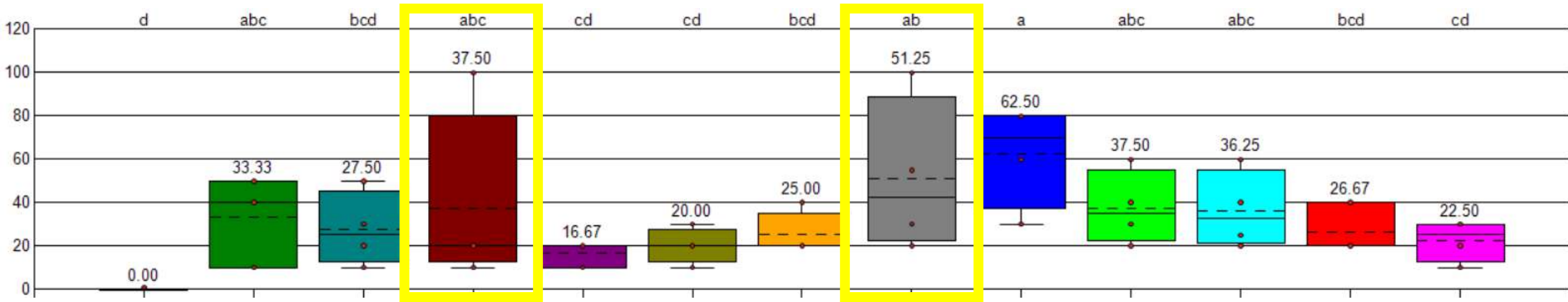


How HPG handles Data



Assessment Data Tab in ARM

3. Box and Whisker Plot



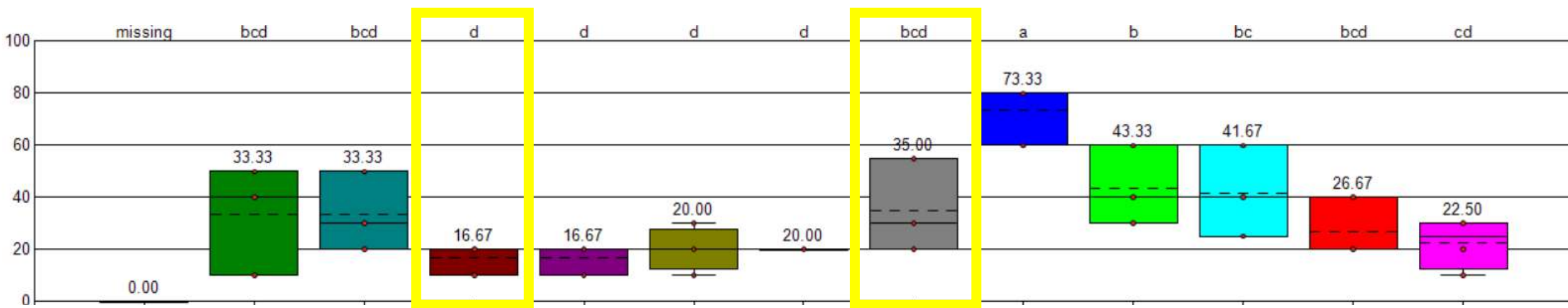


How HPG handles Data

Assessment Data Tab in ARM

3. Box and Whisker Plot

- Outliers removed



100%, 20%, 20%, 10% control
Removed 100%

100%, 55%, 30%, 20% control
Removed 100%



How HPG handles Data



Assessment Data Tab in ARM

4. Presentation Development

- Create presentations for review with HPG Staff
 - What to/not to pursue further testing
- Enter data into internal database for long-term storage and viewing
- Review data for future trial placement
- Data review with field personnel for their thoughts/experiences



How HPG handles Data



Final thoughts

1. Ensure ratings are objective and performed by the same person
2. Ensure equipment is up to date and functioning properly
3. Calibrate yourself and crew throughout the season
4. Be specific with pest ratings and ensure adequate pest coverage
5. Review trials throughout season for errors, field conditions, etc...



How HPG handles Data



Final thoughts

1. Ensure ratings are objective and performed by the same person
2. Ensure equipment is up to date and functioning properly
3. Calibrate yourself and crew throughout the season
4. Be specific with pest ratings and ensure adequate pest coverage
5. Review trials throughout season for errors, field conditions, etc...
6. SLOW DOWN!





What can we do to help y'all?



IS THERE ANYTHING



I CAN DO TO HELP?



Thank you!



DRIVEN by Tradition | COMMITTED to Execution | FOCUSED on Trust | POWERED by Information