ARM 2015.6:
Features Added After Version 2015.1

Gylling Data Management, Inc.

* = key features

Simpler Assessment Data Column Properties

Removed less useful values, reduced height on screen
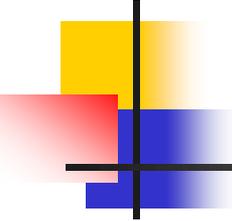
Assessment Editor

- New 'Across columns within subsample' cursor order *

- Tablet Data Entry mode: "Subsamples" data header label displays more columns

- Undo Assessment Comment, Barcode, GPS coordinate, and Damaged field changes

- Clear 'Damaged' flag from marked blocks *

- Several outlier search panel fixes

Convert Yield Automations *

- Column to Convert:
  - 'Current' unit auto-selected from Rating Unit
  - Sample size auto-filled with 1 PLOT if blank
- Sample size in Converted column auto-filled based on selected Desired unit
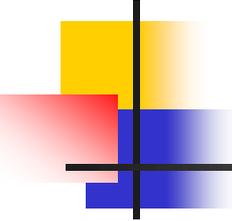
Assessment Editor *

- When choose formula from ARM Action Code list, are now asked to select original column(s) to transform

- Range and Row columns are now copied when select Trial Map Plot Description copy button in range/row numbered trial

- New warning when cursor moves to top of a new column in current cursor order if a key press will overwrite existing data

Assessment Map *

New 'Color by current treatment' option

- Easily review variation in each treatment

- Simpler to find position in each replicate for trial with many treatments
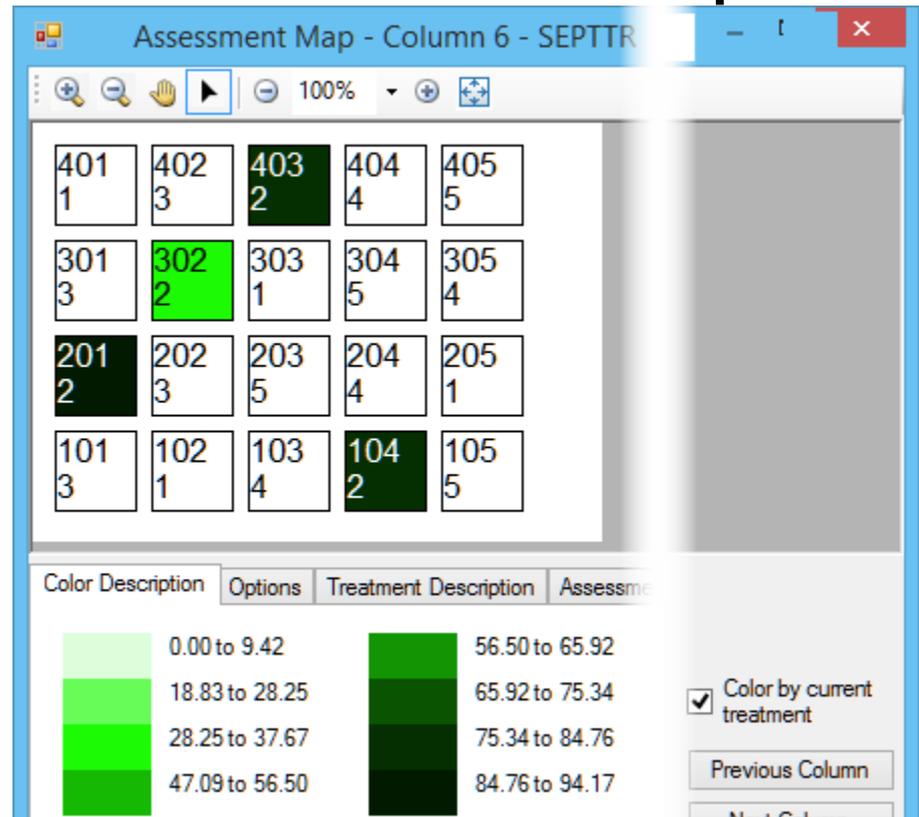
More Option Reset Buttons

Additional "Reset" buttons to restore original default options

- Graph:
- ST:
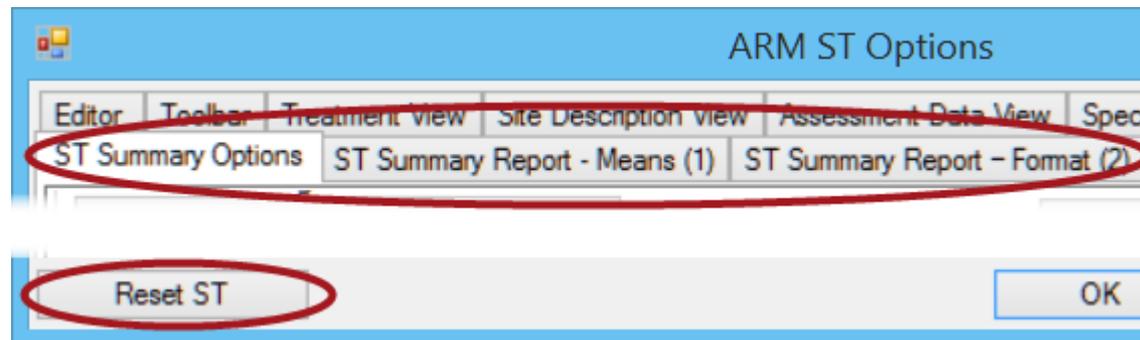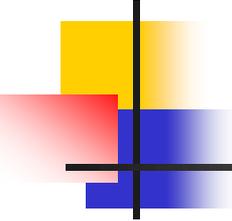
Print Reports

- Trial Status and Protocol Data Headers reports no longer print blank rows
- Technician license can print Data Collection, Map, and Trial Map reports
- Site Description Named View and Selected Tabs reports can be previewed using Report Preview tab
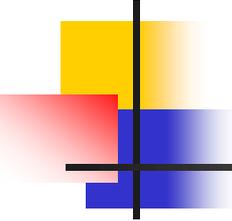
Print Reports *

- Option to:
    - Include median with treatment mean on single trial AOV report, and
    - Also include median on multi-trial ST (Summary Across Trials) AOV reports
- Median helps identify when a single value is "distorting" the mean
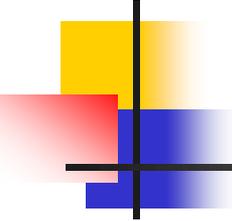
Mean vs. Median Example *

- Phytotoxicity data set: 0 0 0 5 20
Mean   5
Median 0

- % control data set: 50 90 90 90 95
Mean   83
Median 90

- "Balanced data set": 5 10 15 20 25
Mean   15
Median 15
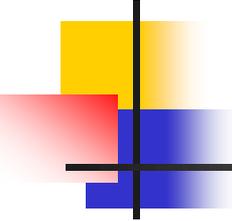
Print Reports

- Changed dose-response graph so major and minor tick marks on X and Y axis are placed at better number increments *
- Fixed issue that sometimes images imbedded in comments did not print

Spray/Seeding Plan Report *

Prints Settings Spray Volume and Mix Size for treatments lines where not specified:

| Trt Line	Trt No.	Type	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Spray Volume	Volume Unit	Mix Size	Mix Unit
2	2	FUNG	Tub	250	G/L	EC	0.5	L/ha	ABC				
3	3	FUNG	Tub	250	G/L	EC	1	L/ha	ABC				
4	4	FUNG	Tilt 250	250	G/L	EC	0.5	L/ha	ABC				
5	5	FUNG	Mico 60	600	G/L	EC	1.5	L/ha	AB	250	L/HA	2.65	Liters

Reps: 4   Appl Code: A   Plots: 2.5 by 10 meters

| Trt No.	Treatment Name	Form Conc	Form Unit	Form Type	Rate	Rate Unit	Appl Code	Spray Volume	Mix Size	Amt Product to Measure	Rep 1	2	3	4
3	Tub	250	G/L	EC	1	l/ha	ABC	200 L/ha	2.15 liters	10.75 ml/mx	101	202	301	402
1	Untreated Check						ABC				102	205	303	401
4	Tilt 250	250	G/L	EC	0.5	l/ha	ABC	200 L/ha	2.15 liters	5.375 ml/mx	103	204	305	404
2	Tub	250	G/L	EC	0.5	l/ha	ABC	200 L/ha	2.15 liters	5.375 ml/mx	104	201	302	403
5	Mico 60	600	G/L	EC	1.5	l/ha	AB	250 L/HA	2.65 Liters	15.9 ml/mx	105	203	304	405
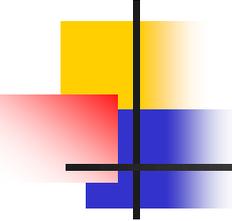
Spray/Seeding Plan Report

Canopy height rates

- Mix size printed for canopy height treatments is now multiplied by canopy height entered in Site Description

- Calculated mix size in the table heading is corrected for canopy height treatments
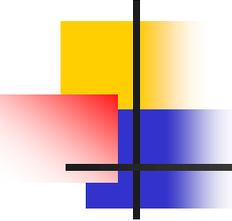
Labels Report

- Adjusted margin defaults for Avery 3451, 5160, 5161, 5163, L6103, L6105 to better fit label sheets

- Added Avery 5162 and 5735 labels

- Single-click now loads label defaults

- Force right and bottom margins to 0 when printing

- Metric label margins are more accurate

- Last label row on page not skipped for labels with vertical buffer between rows
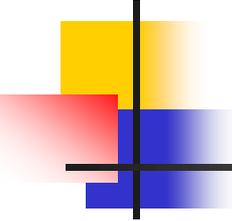
Convert Yield

- Auto-fills 'Adjust to dry moisture percent' option from '% Standard Moisture' in Crop Description of the Site Description
- Converted yield is now 0 when original weight is 0 and adjusted moisture is missing

Study List Grid

- 'Auto-Size Column Widths' right-click menu item sizes grid columns based on contents

- New 'Official Trial ID' and 'Climate Zone' fields *

'Create Trial' Checks Plot Size

- Prompts if Treated Plot Width and Length in protocol description is different than in Settings

Export Success Messages

Message color indicates success

- 'Export Successful' is green
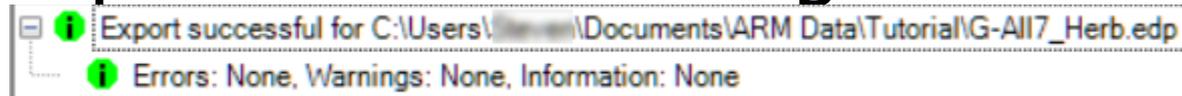
- 'Export not Successful' is red
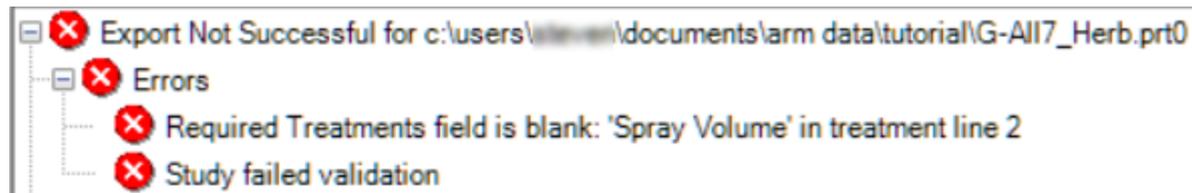
Data Export *

New 'Completion action" options:

- Auto-open exported data in the registered Windows program for selected file type (such as Excel for *.csv exports)

- Auto-open in Windows Explorer the folder containing exported data

Data Export Options

rimental unit numbers

'Plot' experimental unit ation

Completion action
- Auto-open file
- Open file location
- Close dialog
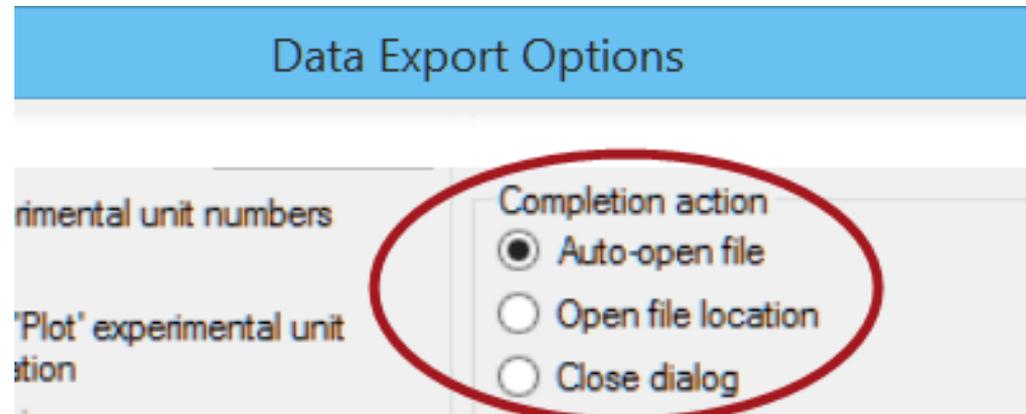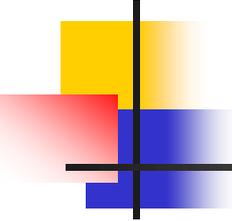
Data Export

Export extended 'Plot' description:

-	Sub	Rep	Blk	Col	Plot △	Trt	Alt Plot ID	Barcode/RFID	Lat	Long
🔒	1	1	1	1	101	2				
📋	1	1	1	2	102	5				

- New format option
- Use to include plot IDs and location information when exporting to other programs

Merge from Study *

- New button on properties panels

- Use to **add** matching information from another study into current study

- Also on right-click menus

Properties

View Options...

Merge from Study...

Merge Study Information

Sections
- [ ] Add header
- [ ] Add treatments
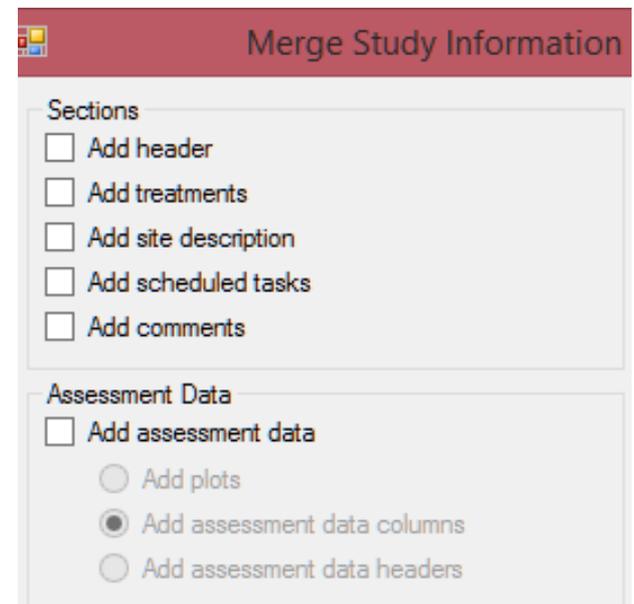- [ ] Add site description
- [ ] Add scheduled tasks
- [ ] Add comments

Assessment Data
- [ ] Add assessment data
  - ( ) Add plots
  - (•) Add assessment data columns
  - ( ) Add assessment data headers

Undo

Merge Header from Study...

Merge Treatments from Study...

Merge Data Headers from Study...

Merge Protocol Description from Study...

Merge from Study - Use to: *

- Build new protocol (trial plan) from a similar existing study
  - Even from a sponsor's customized protocol
- Add assessment headers (description)
- Add location, soil, and/or moisture from another trial in same field
- Combine 2+ identical trials at different locations into split-plot trial
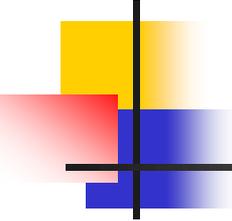
Merge Studies

- When merge protocol description, are now asked whether to update all merged dates to the current year *
  - Simplifies using a previous year's protocol
- Select study to merge either from study list or by using Browse button
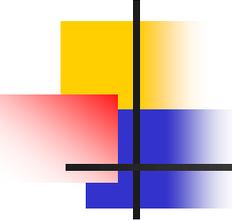
GDMdef Study Definitions

- Trial Year field in Header
  - Is auto-filled with current year
  - Is validated to help avoid invalid entries
- Changed Appl. Start Time and Moisture Time fields to time format, not free text
- Renamed 'Density' to 'Specific Gravity' in treatments editor
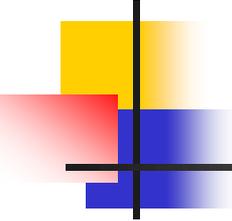
GDMdef Study Definitions

- New GPS Precision field in General Trial tab of Site Description
- 'CFU/g' displays in the Rate Unit list
- More rate units in Other Rate Unit list

Treatments *

- Clearer message when trial treatments change will unbalance multi-factor trial:

| 13 | 7 | Hyvar X | 80 | WP | 4 | KG A/HA | A | | | | A |
14	7	1 MAP									B
15	8	Hyvar X	80	WP	5	KG A/HA	A				A
16	8	2 MAP									B

ARM - ARM Request

Do you wish to change the 'Rate' for this treatment component across all occurrences of A 4?

Select 'Yes' to change the 'Rate' for this treatment component across all occurrences of A 4.

Select 'No' to change only the current field.

Select 'Cancel' to stop changes.

Yes   No   Cancel

ARM - SPECIAL CONFIRMATION

Should trial design be downgraded to Randomized Complete Block (RCB) because treatment level information is no longer consistent across factors?

Select 'Yes' to downgrade to Randomized Complete Block (RCB). WARNING: Not recommended. Downgrade only when the original multifactor design is no longer applicable.

Select 'No' to keep the study as multi-factor.

Yes   No

Sponsor Customizations May be Set to Expire *

- Sponsors may 'expire' their customized study definitions for contractors:
  - ARM displays warning messages when customization is expiring
  - Are identified as 'obsolete' in About ARM
  - Cannot create protocol or trial
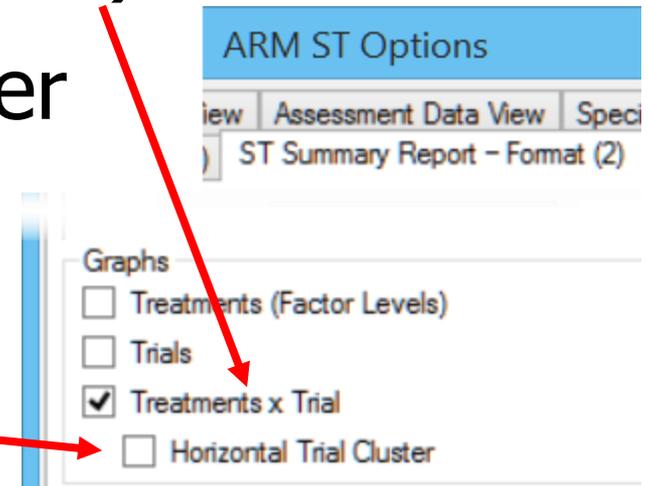 - *Can* request customization again from sponsor after expired
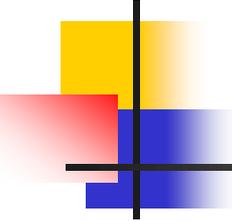
Other

- Support starting column number > 1 for Latin square trials

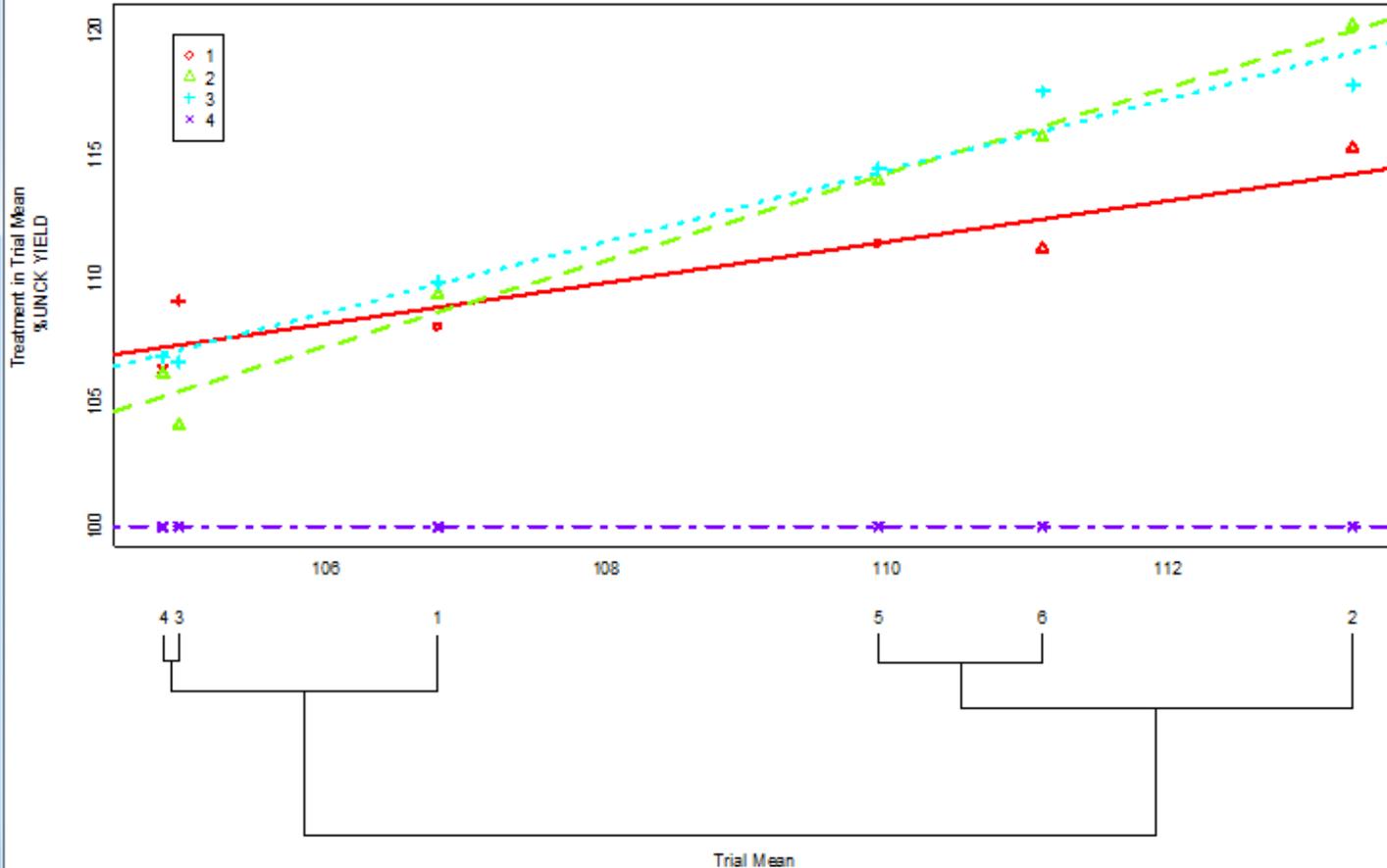- New startup message warning when installed ARM program is obsolete (more than 2 years old)

Summary Across Trials 2015 *

- Graph helps identify "location" (trial) groups when evidence of location effect (treatment x trial interaction) is detected

- Option to rotate the cluster analysis dendogram, useful when analyzing many trials

- 'Print ST Summary' dialog displays faster

ARM ST Options

iew | Assessment Data View | Speci
) | ST Summary Report – Format (2)

Graphs
☐ Treatments (Factor Levels)
☐ Trials
☑ Treatments x Trial
☐ Horizontal Trial Cluster

ST 2015 *