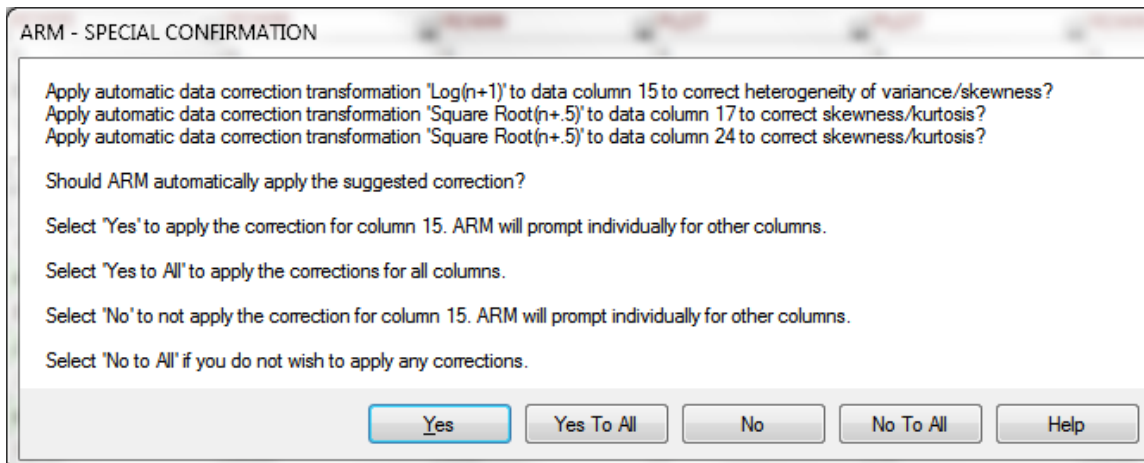


ARM Automatic Data Transformations

By default in ARM, when violations of AOV assumptions are detected, you will be prompted to apply automatic transformations:



ARM - SPECIAL CONFIRMATION

Apply automatic data correction transformation 'Log(n+1)' to data column 15 to correct heterogeneity of variance/skewness?
 Apply automatic data correction transformation 'Square Root(n+.5)' to data column 17 to correct skewness/kurtosis?
 Apply automatic data correction transformation 'Square Root(n+.5)' to data column 24 to correct skewness/kurtosis?

Should ARM automatically apply the suggested correction?

Select 'Yes' to apply the correction for column 15. ARM will prompt individually for other columns.

Select 'Yes to All' to apply the corrections for all columns.

Select 'No' to not apply the correction for column 15. ARM will prompt individually for other columns.

Select 'No to All' if you do not wish to apply any corrections.

Buttons: Yes, Yes To All, No, No To All, Help

If you choose “Yes” or “Yes to all” ARM will apply a data correction **transformation** to raw data in the *same* column as the data. The original, raw data is not altered but de-transformed means will be prints on all reports:

11
CANOLAWHITE MOLD CLAEU
Canola Whitemold Severity Classes - EU
1 BRSNW
Rape, Winter
BRAP
Brassica napus (Winter)
MEDLEY
D Disease
1 SCLESC
Mold, White (S. sclerotiorum)
Sclerotinia sclerotiorum
3
1
Jun-12-15
52 DA-A
52 52
277 DP-1
PLANT C
PESINC
%
50
PLANT
1
3
% Incidence - SEV
AL 10[2]
3
17,6 a
7,8 a
7,2 a
6,0 a
8,6 a
7,7 a

De-transformed mean (AL means Automatic Logarithm Transformation)

What is the difference between the Non-transformed mean and De-transformed mean?

Let's have a look to the previous columns and do the comparison between the two means:

Non-transformed mean	11 CANOLAWHITE MOLDCLAEU Canola Whitemold Severity Classes - EU 1 BRSNW Rape, Winter BRAP Brassica napus (Winter) MEDLEY D Disease 1 SCLESC Mold, White (S. sclerotiorum) Sclerotinia sclerotiorum 3 1 Jun-12-15 52 DA-A 52 52 277 DP-1 PLANT C PESINC % 50 PLANT 1 3 % Incidence fr SEV TIO[2]	11 CANOLAWHITE MOLDCLAEU Canola Whitemold Severity Classes - EU 1 BRSNW Rape, Winter BRAP Brassica napus (Winter) MEDLEY D Disease 1 SCLESC Mold, White (S. sclerotiorum) Sclerotinia sclerotiorum 3 1 Jun-12-15 52 DA-A 52 52 277 DP-1 PLANT C PESINC % 50 PLANT 1 3 % Incidence fr SEV AL TIO[2]	De-transformed mean
	3	3	
	19,5 a	17,6 a	
	8,5 a	7,8 a	
	7,5 a	7,2 a	
	7,0 a	6,0 a	
	9,0 a	8,6 a	
	9,5 a	7,7 a	

As you can notice, for a same set of raw data, means are different.

How can I Print a Non-Transformed mean and keep the benefit of the transformation?

In your ARM Means Table report options, please uncheck the following option. This has to be done once, the setting will remain next time you will open ARM.

AOV Means Table Report Options

Pre-mix Ingredient Fields to Print Global - General Global - Page Heading Global - Borders

AOV Means Table Report Options General Summary General Summary Page Setup

Missing data estimates

☐ Yates

☒ Average

Assessment data columns

☐ All

☐ Select

☐ Automatic

☒ Current view

☐ Paginate to keep together each sort section

View...

Assessment data header rows

List:

☐ All ☒ Automatic

☐ Select ☐ Current view

List validation comments

Comment 1

☒ List comments in table format

☒ Include transformation equations

☒ Include footnotes

☒ Include column number

☒ Print data headers once per column

☐ De-Transform means

Force number of decimals accuracy to:

Treatments

☒ Drop blank line between

☐ List ingredients for pre-mixes...

☒ List validation comments

☐ Identify when selected treatments are summarized

Options...

Fields To Print...

Apply automatic transformations or treatment exclusions to data columns that violate assumptions of AOV

☐ Print selected replicates

Prompt

Tip: Open a study to enable all report options, since some report options are study-dependent.

OK Cancel Help

When you wish to perform a transformation, please add a transformed data column just next to the raw data column.

Non-transformed mean			Transformed mean
	11	11	
	CANOLAWHITE MOLDCLAEU	CANOLAWHITE MOLDCLAEU	
	Canola Whitemold Severity Classes - EU	Canola Whitemold Severity Classes - EU	
	1 BRSNW	1 BRSNW	
	Rape, Winter	Rape, Winter	
	BRAP	BRAP	
	Brassica napus (Winter)	Brassica napus (Winter)	
	MEDLEY	MEDLEY	
	D Disease	D Disease	
	1 SCLESC	1 SCLESC	
	Mold, White (S. sclerotiorum)	Mold, White (S. sclerotiorum)	
	Sclerotinia sclerotiorum	Sclerotinia sclerotiorum	
	3	3	
	1	1	
	Jun-12-15	Jun-12-15	
	52 DA-A	52 DA-A	
	52 52	52 52	
	277 DP-1	277 DP-1	
	PLANT C	PLANT C	
	PESINC	PESINC	
	%	%	
	50	50	
	PLANT	PLANT	
	1	1	
	3	3	
	% Incidence fr SEV	% Incidence fr SEV	
	TIO[2]	TL 3]	
		1	
	3	4	
	19,5 a	1,3 a	
	8,5 a	0,9 a	
	7,5 a	0,9 a	
	7,0 a	0,8 a	
	9,0 a	1,0 a	
	9,5 a	0,9 a	

In this case, you have the non-transformed mean and you can do the analysis concerning statistical groups on the transformed column.

Conclusion:

- Please avoid Automatic transformations (ARM action codes AA, AL and AS)
- Add a new column with classic transformations (ARM actin codes TA, TL and TS)