

ARM ST (Summary Across Trials)

by Gylling Data Management, Inc.

The Solution for Your Research Data Needs

www.gdmdata.com

What is ARM ST?

ARM ST (Summary Across Trials) is an add-in option that fits into an installed ARM 7 program. This valuable tool combines and averages similar assessments in ARM research trials across locations and years. ARM ST helps researchers average and report similar trials conducted at several locations, or for multi-year trials. Because ARM ST uses the ARM interface, an experienced ARM user can readily learn to use ARM ST.

Product managers can use ARM ST to average results for a trial series based on a common protocol. ST aids in planning research by identifying existing trials with a specific treatment or group of treatments, and then listing all assessments for those treatments.

Will the ARM ST Program save me time?

Yes. ARM ST is fast! It is designed to read and summarize trials very quickly! ARM ST can *save many hours of time* for each series of trials that you summarize. Trial search criteria can be specified for:

- ◆ Treatments
- ◆ Assessment Data Columns
- ◆ General Study Header
- ◆ Site Description

Search criteria can include wildcards. Reports are produced in a format that is very useful for data presentations and year-end summaries of results.

Once ARM ST is installed into your existing ARM program, you can switch between ARM and ARM ST with a single button click. ARM ST features the same on-line help system as ARM and includes an extensive User's Guide including tutorial and quick reference card.

Selected Features in ARM ST

Before ARM ST can search and summarize trials, it needs to know the information for which to search. In database terms this would be called a query definition. In ARM ST this query definition is called "criteria".

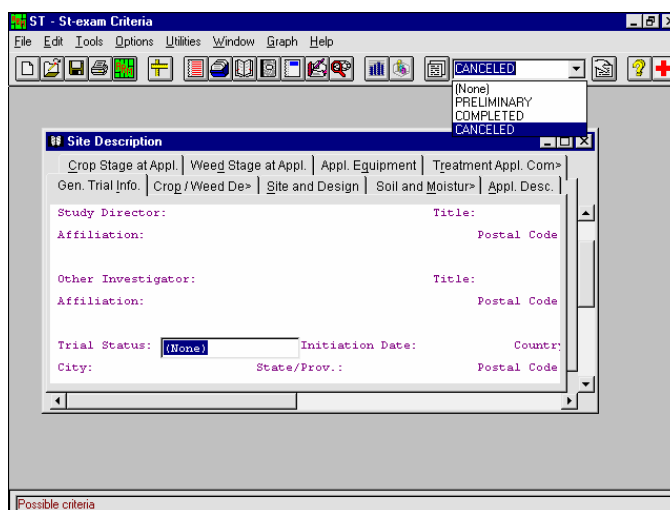
- ◆ The following example illustrates data header criteria entered in a fictitious summary criteria file and the data columns that are included in the summary based on those criteria. Not all header lines are shown. We intentionally show a Match and Combine wildcard * for Rating Date to demonstrate that while you want the Rating Date header line included, you do not need it separated into discrete columns for each different rating date. By looking at the example, the following data header criteria could yield a summary listing the four indicated data columns.

Note that all four summarized columns differ in at least one of the header lines marked with @. If the ARM Data Type

entry was replaced with * and then summarized again, the first two columns would be combined.

Data Header Criteria		Data Included in Summary			
Weed/crop code	SET@	SETVI	SETVI	SETLU	SETLU
Rating data type	@	Control	Control	Count	Control
Rating unit	@	Percent	Percent	# / m2	Percent
Rating date	*				
Trt-Eval Interval	14-28 DAT	14 DAT	28 DAT	28 DAT	28 DAT
ARM Action Code	@	P			P
Decimals Accuracy	1				

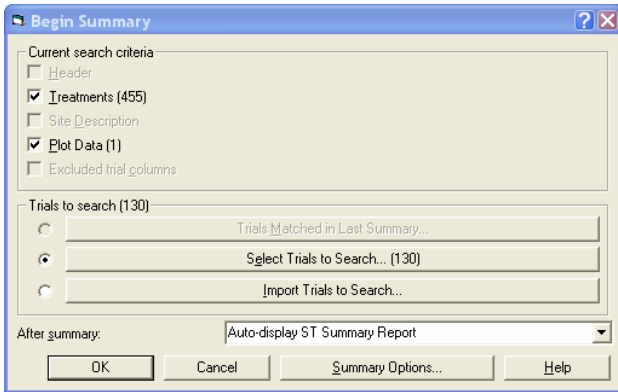
- ◆ When defining data header match criteria, a match property of Every, Last, Max, or Min can also be defined. "Every" includes all trial assessment data columns that match the criteria. "Last" includes only the last data column per trial that matches criteria based on rating date. "Max" or "Min" includes the highest or lowest value per treatment from one or more data columns that match criteria. The "Max" property is especially useful to find the greatest phytotoxicity per treatment across several rating dates in a trial.
- ◆ When entering search criteria, ARM ST can scan a series of trials and list the different entries present in the current entry field. Use this feature to quickly discover which treatment names, pests, and crop species are present in the trials. You can even select items from this list to use as search criteria.



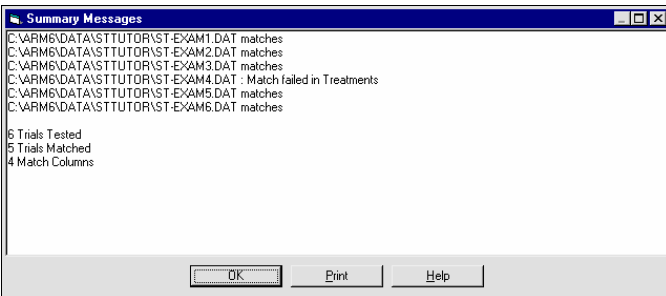
- ◆ Use the Build Treatments dialog to select trials from which ARM ST should extract treatment information. As ARM ST reads each treatment from a trial, it compares treatment match fields (set in Summary Options Dialog) to determine if each trial treatment matches a treatment already defined in

the criteria. If not, ARM ST adds the new treatment to the criteria. No action occurs if ARM ST determines that the trial treatment matches a treatment that is already in the treatment criteria. The process of building treatments also utilizes any criteria match wildcards that are specified in any existing treatment criteria. Only information in the treatment match fields is added to the treatment editor.

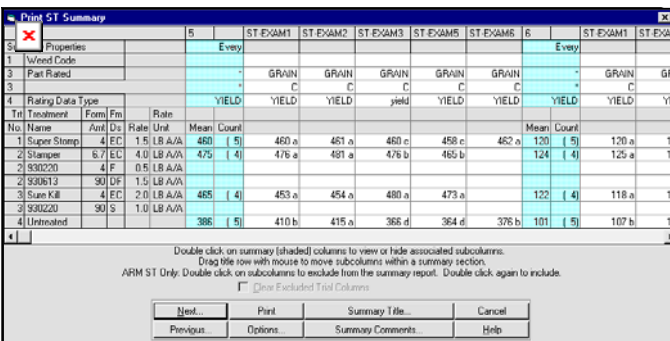
- ARM ST matches treatments across different rate units, even across AI-based and product-based rate (dosage) units. (Note: Formulation type and concentration must be entered in treatment criteria to match across AI-based and product-based rate units.)



- During summarizing, ARM ST prints messages listing the reason why any excluded trials did not meet the current selection criteria. This helps to identify where differences occur within a group of trials.



- Once a series of trials is summarized, you can:
 - Preview results on screen in a convenient grid format. You can easily collapse and expand detail columns on this grid, such as individual trial means. Re-arrange columns within groups by simply dragging the column with the mouse.



- Selectively remove from summary individual trial columns that were matched but for some reason are not appropriate to include. For example, you may remove a trial rating where pest pressure was very low and ratings were thus inconsistent.
- Use the Options dialog to change the header rows that are displayed and sort the result columns.
- Enter a title for the report, and write a discussion for the summarized trial information while viewing the summary report.
- Print the current summary view on paper.

Your Company Name														
		5 ST-EXAM1		ST-EXAM2		ST-EXAM3		ST-EXAM5		ST-EXAM6		6 ST-EXAM1		
Summary Properties		Last												
Weed Code		GRAIN		GRAIN		GRAIN		GRAIN		GRAIN		GRAIN		
Part Rated		C		C		C		C		C		C		
Rating Data Type		YIELD		YIELD		YIELD		YIELD		YIELD		YIELD		
Tt	Treatment	Form	Fm	Rate	Mean	Count					Mean	Count		
1	Super Stomp	4	EC	1.5 LB A/A	460	(5)	460 a	461 a	460 c	458 c	462 a	120 (5)	120 a	
2	Stamp	6.7	EC	4.0 LB A/A	475	(4)	476 a	481 a	476 b	465 b		124 (4)	125 a	
				4 F	0.5 LB A/A									
				90 DF	1.5 LB A/A									
3	Sure Kill	4	EC	2.0 LB A/A	465	(4)	453 a	454 a	480 a	473 a	122 (4)	118 a		
4	Untreated			1.0 LB A/A	386	(5)	410 b	415 a	366 d	364 d	376 b	101 (5)	107 b	
AOV For ST-EXAM1		GRAIN C												
SOURCE		DF	SUM OF SQUARES		MEAN SQUARE		F		Prob(F)					
Total		15	15423.437500		618.229167		1.395		0.3064					
Replicate		3	1854.887500		618.229167		1.395		0.3064					
Treatment		3	9579.687500		3193.229167		7.204		0.0091					
Error		9	3889.062500		443.229167									
AOV For ST-EXAM2		GRAIN C												

- Print AOV table for grand means columns.
- Save summarized information in rich text format that can easily be edited using a word processor.
- Export summarized results to a spreadsheet file that can be opened in a program such as Microsoft Excel.
- Graph summary grand means with the ST graph tool.
- Print ARM reports for individual trials in the summary.

Software Requirements

ARM ST is an add-in that requires ARM version 7.

Is ARM ST User Friendly?

Yes! ARM ST runs within ARM. You enter summary criteria into the same ARM study information editors that you already use in ARM. ARM ST offers the same extensive on-line help and tutorial features as ARM.

Recommended System Configuration

- Pentium computer or newer
- Minimum 256 MB RAM
- Typical installation occupies less than 20 MB disk space
- CD-ROM or DVD-ROM drive
- Windows 2000 or newer, including XP and Server 2003
- VGA or higher resolution monitor
- Mouse or pointing device
- Printer